American Druggist

A JOURNAL OF PRACTICAL PHARMACY.

TWENTY-SECOND YEAR.

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American Druggist

A JOURNAL OF PRACTICAL PHARMACY.

AMERICAN DRUGGIST PUBLISHING COMPANY,

A. R. ELLIOTT, President and General Manager,

37 College Place, New York, N. Y.

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SPECIAL AND WANT advertisements, notices of stores wanted or for sale of situations or clerks wanted, etc., will be inserted *free* for the first insertion.

The AMERICAN DRUGGIST *is issued on the 15th of each month. Changes of advertisements should be received before the 5th.*

New advertisements can occasionally be inserted up to the 10th.

Address **all** *communications relating to the* AMERICAN DRUGGIST *to* AMERICAN DRUGGIST PUBLISHING CO., *No. 37 College Place, New York City, to whose order all postal money orders and checks should be made payable.*

Read the label on the wrapper of your paper if you want to know how your account stands.

THE WISCONSIN way of shutting off the cutter's supplies as shown in our news columns is full of vigor and apt to be effective. It goes straight at the jobber in no uncertain terms.

THE HABIT of centuries is difficult to eradicate, and it is to this fact alone that we must ascribe the persistence with which Americans go abroad for wines, for we have better wines at home than we purchase abroad.

THE VALUE of advertising has, we believe, been systematically underestimated by retail druggists. In another column we announce a competition which will arouse a healthy interest in the subject among the druggists of the United States, and bring out many suggestions of practical value.

FIFTY DOLLARS FOR AN IDEA.

COLLECTIVE wisdom is the best. No one man knows it all, though some think they do. We want to bring the collective wisdom of the drug trade to bear on the subject of retail druggists' advertising. To that end we offer on another page a series of prizes aggregating one hundred dollars for hints on advertising.

This is the chance for the "man who knows it all." If the judges in the contest agree with him, he may get the entire hundred dollars.

The clerk frequently talks of what he would do if he "owned this store." Let him write us what he would do, and he may be awarded a prize.

The proprietor frequently thinks of what he would do if he "could spare the money." Let him write it out for us, and he may get at least a portion of the money wanted.

The proprietor's wife frequently tells him that he doesn't know how to run the business—at least some of them do—and that she would do thus and so if she could have her way. The few that do not have their way are invited to state the "way" for the benefit of our readers, and incidentally for a possible share of the one hundred dollars.

We want ideas. We would like to have them well expressed, but that is not essential; if the germ is there the externals are not so important.

Whether you win or not, participation in such a contest will benefit you by awakening you more thoroughly to the value of advertising to the retail druggist.

LET DRUGGISTS WORK TOGETHER

WE show in another column the Wisconsin way of attacking the cutters' base of supplies. To operate this plan successfully requires independent local organizations working in entire harmony with a general organization such as the Interstate League, under the policy laid down by that energetic body. In this way only can permanent good be accomplished.

The druggists can learn a lesson in the art of organization from the politician. Notwithstanding all that has been said against "the machine" in politics, "the machine" remains a recognized and dominant force. It has its virtues as well as its faults. Let the druggists' organizations emulate the former, avoiding the latter. The Interstate League, backed by perfected local organizations, will be a machine of the strongest and most effective kind, and one to which the AMERICAN

DRUGGIST will lend its most active support in the fight against the unfair competition of department stores and cutters. The AMERICAN DRUGGIST is not a mugwump fearing to give support to any plan for the good of the drug trade, or damning with faint praise lest it should be looked upon as a poor prophet in the event of a possible failure. It comes out boldly and fearlessly as a champion of the cause of the retail druggist as against the cutter. It is well to make your own preparations where feasible, and in a large number of cases it is feasible. But this alone does not cover the ground. The druggist must handle proprietary goods, and in many sections their sale forms a very considerable proportion of the druggist's business and should yield a fair profit.

We believe that the Interstate League offers a promise of aid, and we earnestly counsel our readers to give this organization their hearty support.

HELP EDUCATE YOUR CLERKS.

EMPLOYERS frequently complain of the inefficiency of employees, though they themselves do nothing toward remedying the fault. In employing assistants in a retail business, it is not alone sufficient that competent clerks should be obtained, but it is necessary to arouse and maintain in them a personal interest in the welfare of the business. The clerks should be kept posted on new articles and lines of goods appearing on the market. They should be instructed, and their interest aroused in the art of salesmanship. While this last is to a certain extent a natural gift, it may be cultivated and educated to a marked degree.

In the retail drug business this continued education is even more essential than in any other line, for the constant advances made in the scientific aspects of pharmacy must be kept track of if the clerk is to be anything more than a mere automaton, while the new departures in sundries, etc., notices of which appear in the trade press from time to time, may at any time be called for, and the clerk should not be ignorant of their nature, use and price.

Such information as this can best be obtained through the columns of the pharmaceutical journals, and each clerk should be encouraged to read these carefully, and with an eye to the practical benefit to be derived from them. It may be objected that "we already have the journals, but the clerks won't read them." This may be true, and the first word contains the key to the situation. "*We*" have the papers—not the clerk. There is but little opportunity in the rush and hurry of business for the clerk to read the papers at the store, even if he be invited to do so, and in many stores the journals are laid on the proprietor's private desk and the clerk not even given an opportunity to see them. Furthermore, he lacks the personal interest in the journal which he would feel if it were his own property. Let the employer make the journal the personal property of the clerk, and he will find it an excellent investment, the returns taking the shape of a livelier and more intelligent interest in the business. To obtain the best returns for this investment the employer should first look over the papers as soon as received and mark one or two of the articles which, in his opinion, would be of immediate value to the clerks. A copy should be thus marked and then handed to each clerk with a suggestion that he will probably find the marked article interesting.

If this policy is systematically pursued, there can be no question but that the efficiency of the clerks will be materially enhanced, while the friendly interest implied by the courtesy will attach them more warmly to the interests of their employers.

This is no theoretical conclusion, but is drawn from observation of actual practice. One of the most successful retail haberdashers in New York City subscribes to twenty copies of a trade paper in his line, one for each of his salesmen, marking each copy as suggested above, and he states that the money so spent is one of his most profitable investments.

The AMERICAN DRUGGIST will gladly contribute its share toward the adoption of this scheme among progressive retail druggists, and to that end will agree hereafter to accept orders for subscriptions at seventy-five cents each per year when more than one copy is sent to the same address.

Won't you give this plan a fair trial?

THE PRIZE FORMULAS FOR HOT SODA.

IN the October issue the AMERICAN DRUGGIST offered a prize of fifteen dollars for the three best formulas submitted for hot soda, with hints on dispensing. The numerous papers already submitted in this competition indicates that druggists are coming to realize to some extent the possibilities which lie dormant in this field.

The contest is not yet concluded, and we would be pleased to have all our readers who have had practical experience in hot soda favor us and their confrères with suggestion based on that experience. The hot soda contest will be closed on December 5th, and all papers should be submitted as early as possible.

"THE HIT 'BIRD FLUTTERS."

There are some old and true sayings, among which are "The hit bird flutters," and "The most clubs and stones are found under the best apples trees."

That an aged and impotent publication in the drug line is hard-hit, is shown by the way it flutters, and that the AMERICAN DRUGGIST bears pretty good apples is shown by the number of clubs which our aged and impotent contemporary shies in our direction.

Our aged and impotent neighbor, however, defeats its own purpose by telling so many and big lies that the common sense of the trade rejects them like an overdose of ipecac.

We would briefly state that no person or firm in the grocery trade owns a dollar in the AMERICAN DRUGGIST. That we claim a larger paid circulation than any other drug paper in the United States, save one, and through decency, dignity and minding our own business, we are daily climbing to the FIRST position.

We wish our contemporaries abundant success. The

field is wide enough for all. The AMERICAN DRUGGIST will continue to move forward in a dignified and honorable way, honestly endeavoring to make each succeeding issue better than the one that preceded, and thus strive to merit the support alike of subscribers and advertisers who have no time for and no sympathy with irrational misrepresentations and scoldings.

PROPRIETARY MEDICINES AND THE POISON LAWS.

ON the first of November a pharmacy law went into effect in the State of Mississippi which contained, as is usual in such enactments, a clause imposing certain restrictions on the sale of "preparations" of opium and morphine. Mr. John P. Mayo, secretary of the Tombigbee Pharmaceutical Association of that State, raised a question as to the construction that should be placed on the term "preparations," and this question is authoritatively answered by the attorney general and by one of the codifiers of the laws of that State, the correspondence being presented elsewhere in this issue.

At precisely what point a preparation containing opium becomes a preparation of opium it would be difficult to determine. Reasoning logically, camphorated tincture of opium is as well entitled to rank as a preparation as is wine of opium, the main difference in each case being one of relative opium strength of the preparation. Of course the other ingredients present in the weaker preparation have relatively greater therapeutic action than do those in the stronger, since they are administered in larger doses, but this is merely an incident, and does not affect the material contention.

While it would work an unnecessary hardship to restrict the sale of all preparations containing opium to physicians' prescriptions, there can be no reasonable doubt that a good purpose would be served if a restriction of some sort were thrown about the sale of all preparations containing this and certain other narcotics in appreciable quantities, whether they were proprietary preparations or not. In fact, it is in proprietary preparations that the greatest danger lies, since it is a secret and unrecognized danger, and consequently less easy to guard against.

In England it has recently been decided that proprietary medicines containing scheduled poisons should be so labeled and their sale restricted to legally qualified persons. Restrictions along this line would be a good thing both for the public and for pharmacy, protecting the one from vendors of dangerous quack remedies, and the other from unfair and incompetent competition.

The Mississippi law is open to two criticisms, in that it makes no such provision as that existing in the English law, and in that it prohibits totally the sale of laudanum save on physicians' prescriptions. The latter is the more palpable error of the two, and could be remedied by fixing a maximum quantity that could be sold by the pharmacist without a prescription or by requiring registration of sale, or both.

A WAGER.

The AMERICAN DRUGGIST will wager with any one of its subscribers the best $8.00 Dunlap silk hat to be had that the ancient, aged and impotent drug paper of this city will be copying the progressive management and business methods of the AMERICAN DRUGGIST inside of six months.

DR. BILSINGER, commenting in *Ueber Land und Meer* on the American disease neurasthenia, counsels rest: "For the modern world, as a whole, the essential thing to be done is to return to ways of life more harmonious with Nature and less vexing to body and soul. The way to do this is clearly pointed out in the teaching of modern hygiene. May society enter upon this way betimes, for its own good and the salvation of the future!" To the druggist, weary with his sixteen hours daily of nervous strain, this counsel is particularly applicable.

THE TENNESSEE druggists are moving toward the enactment of a pharmacy law, and the officers of the organization are making strenuous efforts to arouse the interest and co-operation of the druggists of the State toward the desired end. This is one of the few States whose citizens lack the protection afforded by such laws, and whose pharmacists are open to competition from incompetent competitors. If the druggists of the State are alive to their own best interests, they will actively urge the passage of the bill.

THE Mechanical Rubber Company has been incorporated in New Jersey with a capital stock of fifteen million dollars, while the United States Rubber Company has been incorporated in the same State with a capital stock of fifty millions. The former company has almost complete control of the manufacture of hose, druggists' rubber goods, etc., while the latter consolidates the rubber boot and shoe industry.

A QUESTION of tact is raised in our query column this week of a kind apt to occur at any time. Just how such occurrences should be handled is a serious question, and we would like to hear from our readers on the subject. The case referred to is that in which the dispensing of an overdose of turpentine is discussed.

The label on the wrapper of your paper is a monthly statement of your subscription account. The date printed thereon indicates the time to which your subscription is paid.

Have you a friend who would be interested in the advertising contest! If so send his name on a postal card and we will send him the particulars.

When you send in money on subscription account watch to see if it is duly credited by a change in the label on your wrapper.

Written for the American Druggist.

TIPS ON ADVERTISING.

By A. R. Elliott.

There is not a person on earth who can tell *all* about advertising.

The subject of advertising is like eternity, it has no beginning and no end.

The solution of the problem of advertising, in your business, means success.

Advertising as a trade tonic will never lose its strength so long as merchants have goods to sell and customers can be persuaded to buy.

Every merchant should make advertising a study, because, when he has solved the problem, so far as his business is concerned, it will pay him a hundred-fold.

The best that any writer on the theme of advertising can do is to suggest such methods as his experience has proven to be the most practicable for certain lines of goods sold by like merchants in similar neighborhoods.

The veriest trifle, if it possess value and shows a profit, is not to be thought beneath serious advertising consideration. A shoe lacing is no less effective for advertising to the public than the shoe it secures.

Here is a sample card for tooth brushes:

TOOTH BRUSHES.

A very pretty young girl was on one occasion about to be proposed to.

The young man looked at her teeth, as young men have a way of doing.

There was no proposal. The young man was a fastidious fellow.

Clean, white teeth are particularly desirable for all classes and conditions of men. Better remember that! Better remember that we have the largest stock of tooth-brushes in Binghamton.

Yours in the drug business,

OTIS BROS.,

84 Court Street, Binghamton, N. Y.

Keep a scrap book filled with other people's advertisements that pleased you when you had read them and that attracted your attention. Make additions whenever you get a good chance. File away advertising novelties in it, and in time you will have a priceless collection. You can then take your scrap book and sit down at a moment's notice and write out an advertisement that will bring you enough trade on Saturday to pay all your expenses for a week.

Here is a card for combs and brushes:

Better Comb Your Hair!

Are you going to a ball? Are you going to a wedding? Are you going to a card party? Are you going to church? If you are, you had better comb your hair. It will make a great difference in your appearance.

Perhaps you want a comb and brush, a coarse tooth comb, a fine tooth comb, a hard, stiff brush, or an easy-going brush.

I have now a large unbroken stock of toilet articles, for the Holiday Trade. Then, I sell drugs. Call!

J. H. MANNING, Druggist, Pittsfield, Mass.

A so-called expert, who tells you that by advertising you can overcome prevalent dullness and fill your store with customers when your neighbors are idle, is a false teacher.

It is right to be persistent in advertising, but a dollar spent at a seasonable time, on seasonable goods, is worth three expended at the wrong time, on the wrong article.

Remember that the general appearance of your store and the stock you have to sell is either a poor, good, or indifferent advertisement.

Believing that advertising by card in local papers is one of the first and best mediums, allow me in this issue to present the above. It will be noticeed that in each case just one thing is advertised out of the innumerable items to be found in the stock of every drug store. Advertise one article at a time; it is folly to do otherwise. When the customer comes for the article named, trust to your own ability as a salesman to sell him other things.

$100.00

Prize Competition

For IDEAS in regard to

Retail Druggist's Advertising.

The subject of how best to advertise the business of a **Retail Drug Store** is one of vast importance to more than 30,000 Retail Druggists who are doing business in the United States. It is a subject worthy of the most serious consideration and careful study. It should interest every Druggist and every Druggist's Clerk in America. It may mean an extra **Net Profit of $1,000 a Year** to any Retail Druggist who successfully solves the problem, so far as his business is concerned. It is a subject to which a majority of the Druggists have given little or no attention. As a consequence, Department Stores, that ought to be prohibited by law from selling drugs, are now handling lines that belong to the trade of the legitimate apothecary. Why? Because Department Stores advertise; they make a study of advertising; they spend enormous sums for advertising; they never stop advertising. Would the public ever think of going to dry goods stores to buy drugs if the dry goods stores had not educated the public to do so by advertising? The time has come for the Druggists of this country to wake up to the grand importance of this subject.

THE AMERICAN DRUGGIST Proposes to champion the cause of the Retail Druggists of this country and do all in its power to educate them how best to advertise their business to their legitimate constitutents, and in this work it asks for the co-operation and assistance of every Retail Druggist and every Druggist's Clerk. With this idea in view, the publishers of this journal have determined to offer the following rewards:

THE BEST SYSTEM.

$50. FOR THE BEST LETTER OUTLINING THE MOST ORIGINAL AND PRACTICAL SYSTEM FOR ADVERTISING A RETAIL DRUG BUSINESS, EMBRACING EITHER NEWSPAPERS, CIRCULARS, OR PLACARDS, OR THE THREE IN CONJUNCTION.

THE BEST WORDED CIRCULAR.

$20. FOR THE BEST WORDED CIRCULAR OF 200 WORDS, OR LESS, CALLING ATTENTION TO ANY LINE OF GOODS IN THE STOCK, OR TO THE GENERAL STOCK OF A RETAIL DRUG STORE.

THE BEST DESIGN FOR NEWSPAPER CARDS.

$15. FOR A SET OF THREE OF THE BEST WORDED AND DESIGNED 2, 4 AND 6 INCH CARDS, FOR USE IN LOCAL NEWSPAPERS, FOR ADVERTISING ANY ONE LINE OF GOODS OR THE GENERAL STOCK OF A RETAIL DRUG STORE.

THE BEST PLACARD.

$15. FOR THE BEST WORDED AND DESIGNED PLACARD FOR USE IN SHOW WINDOWS, OR ON FENCES, DEAD WALLS, ETC., FOR ADVERTISING THE STOCK AS A WHOLE, OR ANY ONE LINE OF GOODS IN A RETAIL DRUG STORE.

ALL MATTER submitted in the competition becomes the property of the AMERICAN DRUGGIST, and, if published, the name of the contributor will appear.

THE CANDIDATES for the prizes must have their matter in the hands of the judges by February 1st, 1893, and as much earlier as possible.

THE JUDGES Of the contest will be the Editor of *Printer's Ink*, New York; the Editor of *Art in Advertising*, New York, and the Editor of the AMERICAN DRUGGIST, New York,

Address all communications to

A. R. ELLIOTT,

President AMERICAN DRUGGIST Pub. Co., 37 College Place, N. Y.

Written for the American Druggist.

Hot Soda.

BY E. C. MARSHALL, PH.G.

HOT CROSS BUNS and Hot Corn we have heard of since childhood, and to our delight, for they are real and toothsome delicacies one of which and sometimes both, the subject of this article is not. Not real because we know that "Hot Soda" is not "soda" at all, although the same might be said of "Cold Soda" for neither is soda; so we might in truth say, to be precise, "Hot Soda" is not what is erroneously called cold soda, and cold soda is not soda at all. Verily a jumble of jumbles.

So let us simply say that hot soda is not carbonated water, but merely hot water drawn by gravitation from a receptacle in which it is heated, and variously sweetened and flavored to make a palatable and warming drink. Not toothsome, at times, because of lack of care, of knowledge or of skill in taste.

Now for hot soda to be a success the requisites are: care in the management of every portion of apparatus, knowledge of how to prepare the flavorings, and taste, both of eye and of palate, to so serve the drink as to be enticing to the imagination and pleasing in the realization of the patron of your soda counter.

You may lay it down as an axiom; anything not well served is an injury to your store. To disappoint your customer in soda is as bad for you as to sell poor herbs or drugs, and more so, because your customer is more of a judge of one than he is of the other and is very apt to associate in his mind "Poor soda, poor drugs," and to go elsewhere for what he desires in your line.

Therefore, draw satisfactory hot soda or none at all. Leave it entirely alone or put your mind into it to draw the very best possible, no matter what the expense. It is cheaper in the end for you to draw hot soda that costs you eight cents a glass for five cents, if it fulfills the requirements of being alluring and palatable, than it is to draw soda that costs you three and is unappetizing to the eye and disappointing to the taste. In soda if not in clothing "cheap and nasty" are quite apt to go together.

With regard to the selection of the apparatus but a word need be said. All know that an elaborate and expensive one attracts more customers. While it is entirely true that as palatable a drink can be drawn from a counter-urn as from a Tycoon or Rajah costing perhaps two hundred or more dollars, it must be satisfactory to eye as well as taste, and there is the evident pressure behind the apparatus connected with a water supply that makes the resemblance to soda more real, and there is a suggestion of the tea-kettle about the counter-urn that is prejudicial to building a large trade with it. Therefore let us say that no matter what style we select, it must be connected, if possible, with water pressure. I should prefer just a goose-neck for the counter with the heater underneath to any other style that I know of that is not so connected.

The service must be delicate and neat, cleanliness must be observed to the greatest degree, nice china mugs or tumblers, the first preferably, should be used, and they should be warm and scrupulously clean. The same conditions as to neatness of attendant apply as at the cold soda counter.

As to varieties of beverages to be dispensed, there are four principal ones, coffee, chocolate, beef-tea or bouillon, and clam-juice; to these may be added to suit all tastes, ginger, lemon and checkerberry.

This variety, after an experience of several years, I am convinced will answer all requirements of trade in hot soda. To draw these, four receptacles in the fountain will be required, and one outside. The principle that to draw satisfactory hot soda the syrups must be heated I thoroughly believe in, and I put in my apparatus coffee, chocolate, beef-tea, and a plain syrup; the last for the purpose of drawing lemon, ginger or checkerberry, these being served by drawing the plain syrup and flavoring as required by shaking in the essence. In the case of lemon an addition of phosphate is also made.

Clam-juice is best kept in the ice-box and added to the water as drawn from the apparatus. Now as to the formulas the following are recommended as well-tried and thoroughly palatable if served hot and neatly.

BOUILLON.

1. Extract Beef	3 oz.
2. Water	2 pints
3. Corn Starch	1½ ozs.
4. Salt	2 ozs.

Boil 2 and 3 together until the starch is thoroughly cooked; then add 1 dissolved in eight ounces of hot water, then add 4 and when dissolved make the finished products two and one-half pints. To draw this use about 1 oz. to a 6 oz. mug and flavor with a few drops of a flavoring essence composed of Tinct. of Summer Savory 3 ozs., and Tinct. Capsicum 2 drams.

For coffee I use the following with great success:

Coffee	1 lb.
Glycerine	12 ozs.
Sugar	7 lbs.
Water	q. s.

Mix the glycerine and 84 fl. ozs. of water together and moisten the coffee with 8 ozs of this mixture and let stand one-half hour. Then pack firmly in percolator and pour on the remainder of the liquid previously heated to nearly boiling temperature. When this has disappeared from the surface pour on water untill 1 gall. of infusion has been obtained. To this add the sugar and dissolve without heat.

To draw this, put about 2 ozs. in a 6 oz. mug, add cream and fill with hot water.

CHOCOLATE SYRUP.

1. Powdered Chocolate	4 ozs.
2. Corn Starch	4 drams.
3. Hot Water	2 pints.
4. Sugar	2½ lbs.

Rub 1 and 2 with 6 ozs. of cold water; then pour on 4, stir well and take weight, then boil till the starch is thoroughly cooked, and make up loss in weight, then add 4 and stir until dissolved; when cold add 1¼ fl. drams of extract of vanilla. Draw in the same manner as coffee.

If attention is given to the trade and the water is kept at the right temperature at all times, a trade can be built up that will be satisfactory to both dispenser and customer. It will not do to be discouraged if this is not accomplished in the first week, or month, or even winter, as people because of frequent disappointments are not admirers of hot soda, but if the above beverages are dispensed with neatness and at the right temperature, one need not fear but the trade will come in time. It will never equal the cold soda trade, for many reasons, but it will be a useful adjunct to it, and will assist cigar and other trade in the winter months.

CHARLESTOWN, Mass.

Written for the American Druggist.

Soda Suggestions from the West.

BY F. W. FABER.

In the first place one must be willing to give as much attention to hot soda as he does to cold. Good service neat and attractive apparatus, cleanliness, hot water, not lukewarm, and dainty china mugs, all add a great deal toward increasing your hot soda water trade.

The syrups must be first class. The best should be none too good.

COFFEE.

Take 1 lb. of best Java and Mocha; grind. Moisten in hot water, pack in a closed percolator and pour on enough hot water until three pints are obtained. To this add 1½ oz. of best French brandy. One ounce of this for a cup of coffee, cream, not milk, and sugar to suit.

CHOCOLATE.

Use Philips'or Hance Bros. & White's powdered chocolate for fountain use. Of this take 1½ teaspoonfuls to a cup, add a little hot water rub to a smooth paste then add sugar and cream, anda dash or two of extract of vanilla, and you have as fine a cup of chocolate as can be made. This is made as called for. People can see it is fresh, and they appreciate it.

GINGER.

Fluid ext. ginger	2½ oz.
Sugar	40 oz.
Water for	2½ pints

Take 10 oz. of the sugar and mix with the fluid extract of ginger; heat on water bath till alcohol is evaporated. Then mix with 20 oz. of water, shake till dissolved. Filter and add balance of water and sugar. Dissolve by agitation. These three formulas I have found to give the best of satisfaction.

MINNEAPOLIS, Minn.

Dispensing Hot Soda Water.

BY THOMAS WARWICK.

The hot soda outfit is not an expensive one. A good boiler can be obtained for $100, and a fine draught column for the same amount, while a third hundred will purchase all other requisites to complete a first-class hot-soda outfit. Allowing 6 per cent. interest on the capital invested, this will bring the yearly expense of maintaining the plant to about eighteen dollars, or, allowing for repairs and wear and tear, to about fifty dollars. This is the cost of as good a hot-soda outfit as can be obtained. If the dispenser wishes a cheaper apparatus, he need only construct it himself. Wherever there is a water supply, a druggist can make himself a complete hot-soda outfit for a total cost of less than ten dollars. For drawing the water, his regular dispensing apparatus can be used by disconnecting the mineral-water draught-arm and using a short connecting pipe in place of the cooler. Rubber washers must also be substituted in the draught-arms for the leather ones already there, as the hot water would cause the leather washers to swell up and make trouble.

Next comes the question of a boiler—for not only must you obtain hot water, but it must be under sufficient pressure to thoroughly mix with the syrups used. In most cases where there is a water supply, there is also a boiler attached to the kitchen range, and the water may be drawn from this. Where this is not the case, an inexpensive arrangement is to coil a long block-tin pipe in any convenient open vessel on a stove, and connect one end of the pipe with the water-works and the other end with the draught-arm of the dispensing apparatus. The vessel in which the coil of pipe rests may now be filled with water, which can be kept continually at the boiling point, so that the water drawn through the coil will be always at or near 212°, yet can never become hotter than this. In this manner all danger is avoided. Where no water pressure is at hand, it may be obtained by means of a tank on an upper floor. It must, however, be remembered that a home-made machine is always a makeshift, and is of value merely in an experimental sense, during the time in which the druggist is convincing himself that the hot-soda business is remunerative. Once this point is reached he should abandon his crude device for a better one. A man can make his own machinery, just as he can make his own clothes, but he cannot by any possibility attain as good results with the same expense as a manufacturer who does the work on a large scale. The case is exactly the same as that of a man who would put up his own prescription rather than have it filled by a druggist, because he has heard somewhere that the total cost of all the ingredients will not amount to more than five cents at the utmost. No one would ever try the experiment twice.

As to the cost of making the hot soda-water itself, I would say that a good meat extract can be obtained at the rate of $1.50 per pound, which will make about fifty good drinks,thus leaving a profit of two cents for each glass dispensed. Say three hundred glasses are dispensed in a day—this will leave a profit of $6; or,deducting the interest on a three hundred dollar outfit,repairs, etc., and allowing only 150 days for hot-soda sales, we nevertheless have a profit of $5.66 net for each day during the season. If only two hundred drinks are sold during the day, the net gain would still be $3.66 daily, so that the druggist may safely count on clearing about fifteen dollars from his hot soda sales every week—and these fifteen dollars will be very welcome to the average pharmacist.

Some dispensers, in order to bring up the profits of the business, charge ten cents a glass for their hot soda instead of five. They reason that on a ten-cent glass they make four times as much profit as on a five cent one. This is true enough, but the number of sales made is probably not one-fifth as great, so that the profit is correspondingly reduced, while at the same time the pharmacy receives the bad name of selling its wares at double the price of its competitors—which is also a point worthy of careful consideration. Hence druggists should, as a rule, charge only five cents for their hot-soda drinks, although they may with advantage have a few special ones at ten cents apiece for the benefit of those customers who desire to spend money, and who will choose the most expensive drink even though they really prefer the cheaper ones. There are enough people of this class to make it worth while having one or two expensive drinks, but the real stand-by for the druggist is the five-cent beverage.

Wherever the apothecary is hampered for counter space, he may, instead of buying a special hot soda-water draught-stand, obtain equally good results by purchasing merely a hot-soda draught-arm, and substituting it in place of the mineral-arm on his marble dispensing-apparatus. This plan is, however, open to the objection that no cold beverages can then be dispensed from the apparatus,and hence is not to be recommended, for experience has shown that there is to-day sufficient demand for cold soda, even during the winter season, to make it profitable to run the apparatus the year round.

The principal drinks now dispensed at the hot soda counter are: The various meat extracts, beef-tea, and chicken broth; the "molluscular" extracts, such as clam and oyster juice; the tea, coffee and chocolate extracts; various egg drinks and a few spiritual drinks, such as milk-punch, cognac, etc.

The syrups for the hot soda water may be kept in either the syrup-tanks or in the marble dispensing apparatus, or in bottles under the counter, or preferably in special receptacles in the hot soda apparatus. Here they have the advantage of being themselves heated, so that it is possible to serve a hotter drink in this way than in either of the others. This, however, is not always an advantage, for, with a good hot-soda boiler the water will be heated to such a point that the difficulty will be in cooling it down to the point at which the customers can drink it. This difficulty is met by placing a pitcher of cream on the counter, so that the different patrons may cool their drinks to any point desired.—*Bulletin of Pharmacy.*

A Practical Note on Hot Soda.

The following letter, addressed to C. J. Van Houten & Zoon of this city, by a well-known Washington pharmacist, is a practical pointer, though not entered in the hot soda competition:

It gives me pleasure to say, after giving your Cocoa a fair trial, that it is superior to all others in point of *quality* as well as *economy*. Being freely soluble, it gives special advantages for use at Soda Fountains.

Yours truly,

WASHINGTON, D. C., Sept. 3, 1892. (Signed) S. F. WARE.

Hot Soda Water Flavors.

G. H. Dubelle contributes to the *Pharmaceutical Record* the formulas given below for serving at the hot soda counter, some of which, however, would scarcely pass muster in a prohibition town.

MIKADO TEA PUNCH.

Pekoe tea extract	fl ℥ x.
Red Bordeaux wine	fl ℥ vi.
French cognac	fl ℥ ij.
Simple syrup	Oij.
Soluble extract vanilla	fl ℥ ss.
Soluble essence cinnamon	fl ♈ ij.

Mix well. Pour 1½ fl. ounces into an 8-ounce glass, fill with hot water and serve with spoon.

SLUMBER PUNCH.

Pineapple syrup	fl ℥ viij.
Lemon syrup	fl ℥ iv.
Rose syrup	fl ℥ iv.
French champagne	fl ℥ vi.
Sweet Catawba	fl ℥ iv.
Arrac de Goa	fl ℥ iv.
French cognac	fl ℥ ij.
Simple syrup	Oi.

Mix well and proceed as before.

PLANTATION MOCHA PUNCH.

Mocha coffee extract	fl ℥ x.
Arrac de Goa	fl ℥ iv.
Jamaica rum	fl ℥ iv.
Soluble extract vanilla	fl ℥ ss.
Simple syrup	Oij.

Mix well and proceed as before.

HOT TOM.

Fluid extract of gentian	fl ℥ iss.
Caramel solution	fl ♈ vj.
Soluble extract of ginger	fl ♈ ij.
Soluble extract of capsicum	fl ♈ ij.
Soluble extract of orange	fl ♈ ij.
Sea foam syrup	fl ♈ ij
Simple syrup	cong. i.
Tartaric acid	℥ ij.

Mix well and proceed as before.

COLUMBUS CUP.

Sweet Malaga, Alicante, Marsala, French cognac, Orange syrup (aa)	Oi.
Lemon syrup, Rose syrup (aa)	fl. ℥ viij.
Simple syrup	Oij.

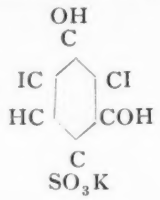
Mix well and proceed as before.

Sugars of the Aromatic Series.—E. Fisher and A. J. Stewart have obtained a sugar to which they gave the name phenyltetrose. By brominating the cyanhydrin of cinnamic aldehyde and eliminating the bromine by boiling with baryta water phenyltrioxybutyric acid is first obtained and, by evaporating the water solution of that acid, it is converted into a lactone $C_6H_5[CH.CH_2{-}CH(OH){-}CO.O]$, which by reduction with sodium amalgam yields the aldehyde—

$$C_6H_5CH(OH){-}CH(OH){-}CH(OH){-}C\langle{}^{H}_{O}$$

Phenyltetrose has not been obtained in a crystalline form; it reduces Fehling's solution, and is very soluble in water, alcohol, or ether. The phenylhydrazine compound crystallizes well and it melts at 154° C. (*Berichte*).

Picrol.—Under this name Darzens and Dubois describe an iodo-derivative of resorcin-monosulphonic acid, the salts of which are powerfully antiseptic but not very poisonous. It is prepared by adding to a water solution of the potassium monosulphonate (5 molecules) an alcoholic solution of iodine (8 at.) and iodic acid (2 molec.), stirring well meanwhile. After the mixture has become perfectly colorless the alcohol is evaporated off and the water solution evaporated *in vacuo* to crystallization. The potassium salt of this iodized acid is a colorless, odorless, crystalline powder, having an acid reaction and very bitter taste. It is soluble in five parts of water; also in glycerine, alcohol, ether, collodion, and alkalies. Picrol contains 52 per cent. of iodine, and its composition is represented by the annexed formula.



—*Repert. de Pharm.*, iv., 343, through *Pharm. Jour.*

Poisoning by Antipyrine.—In the case of a patient at the Moabit Hospital in Berlin, supposed to be suffering from a severe attack of cholera, the fact that the motions were normally solid led to further inquiry, when it was found that the patient had been in the daily habit of taking antipyrine as a remedy for headache. Not suspecting that a feeling of giddiness and a disturbance of vision were the results of antipyrine, its use was continued until 10 grammes had been taken and the symptoms appeared which led to the patient's removal to the hospital. In reference to this case, Guttmann remarks that antipyrine should be used with great caution, and that during the last five years he has met with numerous instances of poisoning by it.—*Apotheker Zeitung.*

Strontium Salts in Medicine.—According to *The Therapist*, the bromide may be given in cases of epilepsy in quantities increasing to 6½ drachms daily. The lactate is said to be well tolerated in daily doses of 120 to 180 grains. The iodide is employed in 1 or 2 per cent. solution in scrofulous disorders, the nitrate in doses of 30 grains to 4 drachms for rheumatism of the joints, while the phosphate is considered by Laborde as deserving to replace the calcium salt, and the acetate is reputed to be an active tænifuge. These strontium salts exert a well-marked antiputrescent and antiseptic power on the tissues and excreta. In employing them care is requisite to insure their purity, and, particularly, their perfect freedom from barium.

Valuation of Crude Carbolic Acid.—F. Seiler recommends the following method: The material to be tested is mixed with an equal weight of milk of lime—caustic lime, with 5 parts water—and warmed on the water bath with constant stirring for one hour. An equal volume of water is then thoroughly stirred into the mixture. In this way soluble compounds of the phenols with lime will be formed, while the tar and resinous substances will form insoluble soaps, which settle to the bottom, and volatile constitutents will be evaporated. After cooling and filtering, the clear solution is to be mixed with enough hydrochloric acid to liberate the phenols, and sodium chloride added to make the separated mass rise to the surface for the purpose of separation and weighing or measurement. Operating in this way, Seiler found that commercial carbolic acid, described as being from 25 to 30 per cent., contained only from 2 to 3 per cent. of phenol and cresols. Eighty per cent. material contained only 50 per cent. R. Klisch objects to the above method of testing, on the ground that even when the calcium carbolate is perfectly washed out from the insoluble soap, the entire quantity of the phenols present is not obtained on addition of hydrochloric acid, and so much would remain dissolved as very materially to affect the value of the result for the determination. He suggests, therefore, that Seiler's method can only serve for approximative valuation of crude carbolic acid.—*Pharm. Zeitung*, No. 84, 650.

THE MANUFACTURE OF THE CINCHONA ALKALOIDS.

BY WALTER D. FIELD.*

PART II.

In Part I. of this paper† the author endeavored to detail an economical method of procedure to extract the alkaloids from the cinchona bark. In this part, the methods of separating the alkaloids from each other on a commercial scale are given.

The separations of the several alkaloids are based on their properties as follows :

1. Separation of quinine from cinchonine, quinidine and cinchonidine.

a. Slight solubility of quinine sulphate in water.

b. Slight solubility of the normal tartrate of quinine.

2. Separation of cinchonidine from quinidine and cinchonine.

a. Slight solubility normal tartrate of cinchonidine in water and easy solubility tartrates of chinchonine and quinidine.

3. Separation of quinidine from cinchonine.

a. Slight solubility of the acid tartrate of quinidine in water.

4. Separation of cinchonine and quinidine by solution of quinidine in 66° B. sulphuric acid, based on the basic properties of quinidine.

5. Separation of quinine, cinchonidine and quinidine remaining in the cinchonine precipitate by treatment with mixed oil.

6. Separation of dissolved and suspended alkaloids from waste soda liquors.

SEPARATION.

The acid solution of the alkaloids obtained by washing the mixed oil extract with dilute sulphuric acid is neutralized with a saturated solution of caustic soda while the alkaloidal solution is kept at a temperature about 5° C. below its boiling point. A mixture of equal parts coarse and fine bone-black is now added in quantity sufficient to decolorize the solution. The amount necessary is easily controlled by the workman. After settling an hour or more, the liquor is ready to run into the crystallizing boxes.

The kettles or boilers used for heating and neutralizing the liquors are made like any ordinary water tank lined with lead, and provided with agitators. They may be heated by steam direct or by using a coil. If steam is blown directly into the solution the bottom of the kettle where the steam strikes must be protected by a sheet of copper, and even then the lining of the kettle will soon be riddled with minute holes. When the steam is introduced by a coil, the lining of the kettle lasts longer but the bottom of the kettle is much more difficult to clean, as the steam coil covers the bottom. Although to the author's mind the practice of blowing steam direct into the alkaloidal solution is very pernicious, yet it is very general in this country. It is pernicious not only from its effect on the kettle, but also because of its undoubted decomposing action upon the alkaloids. In England and on the Continent coils are almost universally used for heating purposes. The liquor, having settled, is now ready to run into the crystallizing boxes. The cock inside of the kettle is placed about 4 or 6 inches from the inside bottom, which admits of the bone black settling. However, the liquor must be strained before crystallizing. Sand strainers were tried, but were found too bulky, hard to clean and got easily choked while the liquor was running through. Finally a filter bag was adopted which was like a coat sleeve turned inside out and cut off square at the shoulder, or resembled two hollow cylinders, one inside the other and fastened together at the bottom leaving the center open. The filter bag is applied to the cock by inserting the cock between the inside and the outside cylinders of cloth, thus producing a filtering surface on the inside as well as the outside.

To crystallize, the neutralized solution of the alkaloids is run into a lead-lined box. This box may be one of many shapes. The smaller the box the quicker the crystallization, but they are more expensive to produce, and require a large floor space. A larger box does not cost so much more, and the crystallization can be forced by agitation. These remarks do not apply to the final crystallization of the quinine sulphate.

A good shape for a crystallizing box is about 6 feet square and 2 feet 6 inches deep, lined with 8-pound lead, and provided with an agitator. Batches run from the kettles at a temperature of 77° to 80° C. are about 65° to 70° C. when they reach the crystallizing box, and by running the agitators during the night, the crystals can be filtered the first thing the next morning.

For filtering, an A. L. C. Dehne through extraction filter press is all that could be desired. For pumping the crystal mush into the press, use a Guild and Garrison "D" filter press pump. This combination of press and pump produces a pressed cake having from 40 to 64 per cent. of moisture in it. The average percentage of moisture in the pressed cake is about 50 per cent. The crystals from the first crystallization of the alkaloids contain an average of 12.6 per cent insoluble alkaloids. On recrystallizing, the crystals are found to contain about 5 per cent. insoluble sulphates. This recrystallization is continued until the quinine sulphate crystals are practically free from cinchonidine. The boxes used for the last crystallization need to be shallow and small and arranged so that the crystals can be rapidly drained. A good form is given in Fig. 1. It it 5½ feet long, 3 feet wide and 6 inches deep, lined with 4 or 6 pound lead. A lead nozzle is burned to the lining at *c* to which may be fastened a hose for running the liquors from the crystals back to the tanks. The box is hinged at *a* and *b*, so that it can be raised at the rear gradually, to allow the crystals to drain. When drained, they are cut into blocks by a knife and placed on frames made of a wooden frame covered with muslin and heavy unsized paper. For the purpose of hastening the drying, the temperature is kept quite high, about 70° to 80° C., just sufficient to slowly dry the crystals without their losing their water of crystallization. The drying-room must be provided with an exhaust fan. The liquor run from the final crystallization is used for dissolving crude crystals again.

The liquors which come from the filtering presses are run into tanks on the floor below, then pumped up into precipitating kettles, where the alkaloids are precipitated with carbonate of sodium (soda ash), the soda liquor run into tanks, the precipitate strained and washed, then dissolved in dilute acid, neutralized and crystallized. This time the crystals contain about 34 per cent. insoluble alkaloids. The liquor filtered from these crystals is precipitated as before, the precipitate washed, and then dissolved, neutralized and crystallized, and this time the crystals test about 49 per cent. insoluble alkaloids.

By recrystallization, these batches of crystals are finally reduced in their percentage of insoluble alkaloids, until finally they are ready for final crystallization.

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* From *The Journal of Analytical and Applied Chemistry.*

† See this journal, May 15, 1892, p. 152.

At this point in the separation of the alkaloids it becomes necessary to adopt other methods, as the alkaloids will no longer crystallize as sulphates. The normal tartrates of quinine and cinchonidine are very much less soluble in water than the normal tartrates of cinchonine and quinidine. The liquor from the crystals, which contain about 19 per cent. insoluble alkaloids, is run into a tank, precipitated with concentrated solution of sodium hydrate, the soda liquor run off, water added, and enough tartaric acid to decompose the precipitate; the solution must be hot during the operation. The solution is nearly neutral when run into the crystallizing boxes. The addition of bone black is not required in any batches except those crystallizing as sulphates. As the amounts of this liquid are never large even in a factory producing 7,000 ounces per week, a crystallizing box 3 or 4 feet wide by 7 or 8 feet long and a foot to a foot and a half deep is a good size.

It may be necessary to allow a day or more for the normal tartrates of quinine and cinchonidine to crystallize, as the amorphous alkaloid exerts a retarding influence on the crystallization.

A filter press can be used to filter the normal tartrates, but they are so thick the plates of the press are rapidly destroyed on account of the extra pressure required.

The normal tartrates of quinine and cinchonidine are decomposed with sodium carbonate, the sodium tartrates being run off in a tank, to have the tartaric acid reclaimed. All the sodium tartrate liquors should be run into this tank, and then worked into tartaric acid when the amount is sufficient.

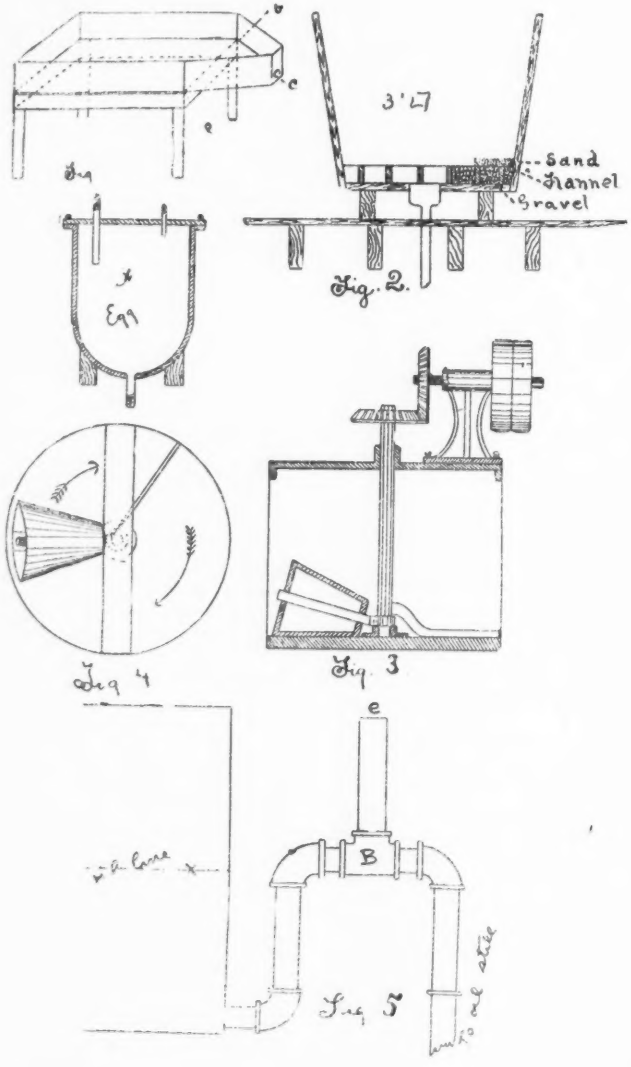

Fig. 2.

Fig. 3

The liquor from the normal tartrates contains the quinidine and cinchonine together with the amorphous alkaloid. The acid tartrates of these are now produced by adding 18 pounds tartaric acid for every 16 pounds used in producing the normal tartrates. Heat the liquor while adding the tartaric acid, and raise to near the boiling point before running into the crystallizing boxes. After an interval of twelve to twenty-four hours, the acid tartrates of quinidine and cinchonine separate, resembling a thick mush. The crystals cannot be filtered in a filter press, but can be filtered in a centrifugal press, and afterward washed without removing from the press.

The liquor from the acid tartrates is precipitated with sodium carbonate, the precipitate transferred to a filter, such as is represented in Fig. 2, and then washed with 66° B. sulphuric acid by the aid of a vacuum pump operated through the egg *A*.

The filter box (see Fig. 2) is lined with a good heavy lead—14 to 16 pounds to the square foot. An opening is left in the bottom for connection with the exhaust chamber. On the bottom is put 3 to 4 inches coarse gravel, about the size of small marbles divided in sections by strips of wood ⅞ inch thick notched on the bottom to allow for the passage of the liquor on the bottom of the filter. The strips are placed from 4 to 5 inches apart, on edge with the notches down. The gravel should be flush with the top of the wooden strips. On the gravel layer place a piece of good flannel, that is, free from cotton, or else once using will render it useless. Let the edges of the flannel piece run up on the sides of the filter 1½ to 2 inches. Now fill on top of the flannel clean sand to the top of the turned up edge. The sand must be packed down tight and the filter must be washed quite often. In washing, remove sand and gravel; wash in pail with dilute sulphuric acid. The filter is best operated thus:

The precipitate to be treated is put in the filter, and then pressed down all around the edges and the pump started. As soon as the pump begins to draw commence pouring the 66° B. oil of vitriol on the precipitate, taking care to distribute the acid evenly. The acid removes the basic chinoidine by reason of its being more easily soluble than the cinchonine and cinchonidine and quinidine. The pump is run until all the acid is removed from the precipitate, which is now a light gray color. The precipitate is now ready for extraction by mixed oil to separate cinchonine from cinchonidine and quinidine. This is done by placing the precipitate in a digester (see Fig. 3) by means of which the precipitate is kneaded with mixed oil several times, each time allowing to settle, and the clear oil drawn off and put in tank to be washed with dilute sulphuric acid.

The roller of the digester is so arranged that it accommodates itself by the uneven character of the bottom of the tank caused by the precipitate. The digester is set with the bottom inclined toward the draw off spout, to facilitate removing the charge. When the precipitate is thoroughly worked, it is removed and put into a tank and agitated with a much larger quantity of oil. After several hours the cinchonine is allowed to settle, and the oil layer containing the last traces of quinine and cinchonidine is separated and washed with dilute sulphuric acid.

The batches of precipitated normal tartrates and acid tartrates are combined with sulphate crystal batches with which they correspond in test, and so on throughout the manufacture it must be the endeavor of the manager to condense liquors, precipitates and crystals as much as possible.

The acid chinoidine sulphate drawn from the egg of the filter is precipitated with caustic soda, the soda liquor removed, and the resinous precipitate evaporated to dryness.

RECOVERY OF WASTE.

For a long time no endeavor was made to extract the alkaloids remaining in the bone black used for decolorizing the liquors, but it was found that when treated in the same manner as the bark, the alkaloids could be extracted. This is now being done with success.

The workmen with their careless manipulation in running off a soda liquor after precipitation of the alkaloids when some of the precipitates are still floating will lose a large amount in a year's time. To avoid this waste the soda liquors are all run into tanks, where they are neutralized and precipitated with caustic soda agitated with mixed oil, the mixed oil washed with acid, and the acid solution of the alkaloids returned to the original bark extract, and thus reclaimed.

In Fig. 5 is given a simple arrangement for controlling the separation of the oil and soda liquor. The tank is filled with mixed oil to the line, and then the soda liquor is run in and the whole agitated. When settled, the soda liquor is run off by the siphon *B*. When the liquid reaches the level of the top of the siphon air enters at *e*, and the siphon ceases to work, and the oil remains in the tank.

By this simple arrangement the separation of oil and water is complete, and stops when ended, even though the workman may not be present.

The solution of alkaloids thus obtained is washed with dilute sulphuric acid, and the acid solution of the alkaloids returned to the original liquor for crystallizing.

All soda liquors are run into a still, and the dissolved oil is distilled off. This still must be run day and night, and sometimes two or more are necessary to keep the soda liquors out of the way. They are of simple construction, just a large boiler-iron tank with a coil in it, and an outlet attached to a cooling room. The distillation is worth the expenditure of money and, space as it reclaims about 7 per cent. of oil, and needs no attention in working.

All sinks in the factory must have their outlets run into a precipitating tank, and the alkaloids, from washing mops, ladles, shovels, etc., etc., reclaimed. This is a most important point, and should not be neglected.

A Crystalline Exudation on the skin has been observed by Drasche (*Therap. Monatshefte*) after the exhibition of salopen. The crystals appeared where after exhibiting 2 to 8 grains of salophen per day, perspiration followed.

Phosphate of Iron and Phosphoric Acid.*

BY LUTHER F. STEVENS.

There seems to be a general impression that the officinal phosphate is compatible with almost everything under all circumstances.

Pharmacy has suffered in this case as in others from its wonderful plenitude and ability to meet emergencies, for we find that when we give the prescribers an inch there is immediately a great demand for an ell. Loud were the complaints concerning true phosphate when that was officinal on account of its insolubility, physicians holding that this fact hindered its therapeutic availability; but now that we have furnished two soluble phosphate salts by linking citrate of soda with the original and each exceedingly useful when properly handled, our second state is worse than the first because of a continual effort to use them out of place.

The following was presented with a verbal order from the physician through the party bringing it "*to be sent out clear.*"

℞ Strychninæ ..... gr. i
Quininæ Sulph. ..... ʒ i
Ferri Phosph. ..... ʒ i
Acid Phosphoric dil. ..... ♏ ii
Syr. Zingiberis. ..... ♏ ii

The next appeared as a copy from a well-known pharmacy in an adjoining city. The customer was exceedingly nervous, and as an extra precaution had brought the former bottle, with everything intact, including directions, shake bottle and a heavy white coating upon the inside, with particular and repeated directions to have the new lot *exactly like what he had before:*

℞ Strych. Sulph. ..... gr. i
Quininæ Sulph. ..... ♏ i
Ferri Phosph. ..... ʒ i
Acid Phosphoric dil. q. s.
Syr. Aurantii.
Aquæ ..... aa. q. s. ft. ʒ iv.

Either formula may be brought to a clear liquid without outside aid by using only the medicinals down to and including the fourth ingredient, and will then stand in good solution for two or three weeks before breaking up. Beyond the fourth, however, this is impossible, as almost any adjuvant, and particularly such as used here, causes an immediate chemical interchange, yielding compounds totally different from what is desired.

To obtain a "clear solution," dissolve the iron scales directly in acid; agitation is sufficient; neither heat nor time will do more, because, whether by accident or design, the quantities given are at the limit of solubility, and if extra iron is added it will crystallize out again in about twenty-four hours in the shape of light green scales, but no decomposition occurs until upon longer standing, although it will come about at last.

This saturated solution of citro-sodic-ferric-phosphate now acts as a solvent for quinine or other alkaloidal salts, as codeine, morphine, brucine, strychnine, all of them being best used as sulphates or hydrochlorates. More quinine can be forced in if an assortment of different salts is used, say sulphate 60, hydrochlorate 20, bi-sulphate 20, equaling 100 grains, but soon a portion of the iron salt falls again in the same green scales as just spoken of.

Trials upon these forms gave the limits when used alone, as near to each other, and slightly in excess of the quantity given in the prescriptions. Bi-sulphate, however, is much slower in dissolving, while phosphate will remain in solution in only one-half the amount of other quinine salts, unless it is added to the acid first, when the same proportion will be taken up, but

*From a paper presented at the last meeting of the American Pharmaceutical meeting and communicated by the author.

then upon adding the iron, one-half the requisite quantity is all that can be accommodated, more causing immediate dissociation even worse in extent than when precipitation occurs in the original, which fact virtually renders quinine phosphate inappropriate for this purpose, nor are phosphates of other alkaloids any better.

When an attempt is made to add quinine sulphate to the acid first a partial decomposition ensues immediately, which can only be remedied by the addition of sufficient of a mineral acid to overcome the weaker phosphoric, and the total result by this time is a very complex compound.

The first prescription was rendered clear by means of dilute hydrochloric acid, a comparatively small quantity only being necessary.

While this inquiry was being prosecuted, and relying somewhat upon statements seen in print, I had stated to friends that an excess of citric acid would perform the same work, but further experimentation proved that, as in the former case, a more powerful agent was needed.

Such work as this coming often to our hands means an active exercise of every sense; in neither of these cases did the written order show what the prescriber wished. Evidently a set rule would not be in order when there is liability on parallel lines of totally opposite results being desired, thus we, from custom which is forceful, must often depend as much upon environment as upon science.

Hence it is well to find out whether such a prescription was prepared before and in what shape, or in absence of knowledge upon that point, and without special instruction otherwise, it is best policy to dispense clear.

The white precipitate so quickly dropped when the proportions are followed, as in the first prescription upon the addition if any ordinary adjuvant, is quinine phosphate in one of the unsaturated forms, possibly with the triatomic acid.

Upon working out the molecular proportions it will soon be evident that the combinations upon which these prescriptions are based are very close to theory, but that after conclusions were jumped at in a totally unwarranted manner.

Phosphate of iron is made by breaking up scaled citrate of iron with officinal sodium phosphate. This when scaled will dissolve in diluted phosphoric acid 1 to 16. If then the solution be neutralized by an alkali it is not thrown out, but *more* may be added. It is far more soluble in water, at ordinary temperatures, 1 to 4 being quickly dissolved, and this will then stand sodium bi-carbonate up to *two-thirds* of the amount of iron phosphate added, and this alkaline solution will, though the color is changed, keep much longer than the acid one containing less iron, but alkaloidal salts could not be added to this alkaline liquor.

It seems, then, that the water does the main work of solution, and that in certain respects is as well satisfied with alkali as with acid; but if the alkali used be potassa in excess and heat applied, a copious brown red precipitate quickly falls, consisting mainly of $Fe_2 OH_6$, and as this is the color of the solution formed with milder alkali, the same change probably occurs, but not going to the extent of precipitating.

When quinine is added to a saturated solution of iron phosphate in phosphoric acid, and then a quantity of syrup or glycerine equal to the diluted acid is added, a complicated change occurs, which molecularly stated can be brought close to the proportions found possible upon trial. Of all diluents tried, glycerine seemed preferable, as the precipitate is held in suspension. Alcohol, or tinctures containing much alcohol, will cause further precipitation than syrups or glycerine.

Many trials were made using all obtainable brands of iron phosphate to see if variations occurred in products from different factories, but for practical prescription work no difference was found. Acids as purchased in diluted form, and samples made from concentrations were tried.

Mercuric Chloride in Alcoholic Solutions.*

As dispenser to the Royal Infirmary Mr. Johnson has to prepare large quantities of dilute aqueous solutions of mercuric chloride, and he sought a method of obtaining such solutions with the greatest expedition and accuracy. To weigh out and triturate the mercuric chloride becomes tedious when large quantities of such surgical solutions as 1 in 500, 1 in 1,000, 1 in 2,000, etc., are constantly in demand, and most dispensers keep, it is believed, stronger solutions on hand from which to prepare the more dilute.

The chloride is soluble enough in many media, such as glycerine, ether, absolute alcohol, rectified and methylated spirits, and sufficiently strong solutions are easily prepared from any of the above solvents for the purpose in hand. Such a solution in glycerine of the strength recommended in Martindale—viz., $HgCl_2$ 2 parts, glycerine by weight 3 parts—is convenient, since 1 fluid drachm mixed with 4 pints of water equals a solution 1 in 1,000; but this solution, though apparently stable, is viscid and difficult to handle with accuracy and speed. A solution in ether, though apparently fairly stable, is liable to evaporate, thereby becoming of uncertain strength. Alcohol, either as absolute alcohol, rectified, or methylated spirit (280 grains in 4 fluid oz., of which 1 fluid drachm mixed with 1 pint of water equals 1 in 1,000) is the most convenient solvent and is used, it is believed, widely in hospitals and surgeries. Unfortunately, however, the spirituous solution is unstable. A reduction of the chloride takes place even while the solution is being effected, and, though never of large amount—often, indeed, very insignificant—is sufficient to lead to inaccuracy. A large number of experiments with solutions of the strength named went to prove that the reduction of the mercuric chloride was influenced by several causes, such as (1) strength of the spirit employed, (2) kind and quality of the spirit, (3) exposure of the solution to light, (4) method of preparation, (5) length of time the solution was kept, etc. The amount of reduction was always indefinite and most uncertain.

The precipitate varied in appearance from flocculent thick masses to a finely crystalline and amorphous powder. In three similar solutions prepared at the same time and in the same manner, and allowed to stand for the same time (ten days), the reduction varied from 0.31 gramme to 0.18 gramme. The precipitate consisted for the most part of mercurous chloride, though organic compounds of mercurosum also were present. The reduction was generally less in absolute alcohol than in rectified or methylated spirit. In the latter solvent the deposit was often colored and flocculent, and of considerable depth. Light greatly influenced the solution. Exposed to direct sunlight, the deposit formed comparatively rapidly and in considerable quantity. It was found that the less the light, the less the deposit. Solutions kept altogether in the dark were often almost free from reduction. Agitation and large bulk of the solution appeared to favor the decomposition, and the deposit was usually greater when

* Abstract of paper read by J. R. Johnson at a meeting of the Liverpool Pharmaceutical Students' Society. From the *Chemist and Druggist*.

the solution was prepared by trituration of the salt in the solvent than when the solution was effected by warmth. It was found that the presence of ammonium and other inorganic chlorides was of no use in preventing the reduction, and that the addition of such compounds as chloroform, chloral, etc., to the extent of 1 per cent. only aided it.

After many fruitless experiments, free chlorine was passed through the solution for a short space of time with excellent results, with absolute alcohol, alcohol, methylated alcohol, or with 1 per cent. $CHCl_3$; though the deposit varied in every case, complete re-solution of the deposit occurred at once when the chlorine was passed through. Each of the solutions had been prepared in a similar manner, and at the same time, and were of the strength already indicated.

The solution through which chlorine has been passed for five or ten minutes, or until very faintly colored, remains perfectly bright and stable. Under ordinary conditions of light and temperature, the solution keeps clear and unaltered for any length of time; but if exposed to direct sunlight, a very slight reduction occurs after some time. The chlorine is generated in abundance from two or three drachms of chlorinated lime, to which dilute HCl is added, and a simple piece of apparatus may be readily improvised and kept on hand for the purpose. Spirit so chlorinated keeps indefinitely and is of the greatest utility. A question, however, arose as to whether the minute amount of free chlorine present would in any way interfere with the germicidal powers of the aqueous solution made therefrom, and though at first sight it appeared to be unlikely that any such result would follow, the opinion of Sir Joseph Lister was asked. He wrote thus:

GLENELG, N. B., Sept 24, 1892.

MY DEAR SIR: Your letter has been forwarded to me to this place. I have no hesitation in answering your question to the effect that the presence of the minute quantity of free chlorine cannot possibly interfere with the antiseptic action of the bichloride. If it had any effect at all, it would be to enhance the antiseptic efficacy. It might possibly make the solution act slightly more upon the steel of the instruments. I may remark that, as the result of recent investigations, I have for some months past abandoned the use of the bichloride in favor of our old friend carbolic acid. It has been shown that a 1-to-40 solution of carbolic acid is really superior in actual germicidal power for such organisms as cause inconvenience in surgery, as compared with any solution of bichloride that could be used for surgical purposes. * * * * *

Believe me, sincerely yours,

JOSEPH LISTER.

P. S.—For purifying instruments and sponges, and the skin of the part to be operated upon, a 1-to-20 solution of carbolic acid is, of course, used.

Although Sir Joseph Lister has abandoned the use of bichloride of mercury in favor of carbolic acid, the former is still largely used, though we may expect many to follow the example of the great surgeon in giving it up. There appears to be some uncertainty as to the effect of heat upon aqueous solutions of mercuric chloride. In "Martindale" there is a statement, concluding with a note of interrogation, that "heat reduces the salt to calomel." Mr. Rushton Parker, one of the honorary surgeons to the Royal Infirmary, was anxious to be assured on this point, and as the result of many experiments, performed quantitatively, Mr. Johnson could not detect the slightest reduction of the chloride in such solutions as 1 in 500, 1 in 1,000, 1 in 2,000, etc.; even after submitting to prolonged boiling.

Lead in Tartaric and Citric Acids.—Buchet has examined a number of commercial samples, and has found that fourteen of them contained combined lead, amounting to 0.0363 per cent., and metallic lead to the extent of 0.0071 per cent. The combined lead was probably in the state of sulphate and the metallic lead had been rubbed off the evaporating pans by stirring (*Pharm. Zeitung.*

Koumiss.*

BY D. H. DAVIES.

Papers upon this subject have from time to time appeared in the *Journal*, but it is curious to note how careful most of the authors have been to evade giving detailed particulars regarding the difficulties that have to be surmounted in the manufacture of aerated milk preparations.

The original Koumiss is the Russian, made from mare's milk, which is used for the obvious reason that it is less rich in casein and fatty matter than cow's milk, and therefore far more easy of digestion.

Mare's milk contains approximately 1.70 per cent. of casein, and 1.40 per cent. of fatty matter, whereas cow's milk contains 4.55 of casein and 3.70 of fatty matter.

I think I am correct in stating that cow's milk is universally used in this country, and it answers the purpose admirably in most instances, but a better preparation is obtained by diluting with water to reduce the percentage of casein, etc.

Mare's milk contains 8.75 of milk sugar, cow's milk only 5.35; it is therefore necessary to add some of this to our preparation. The following formula answers very well. Take of

Fresh milk	12 ozs.
Water	4 ozs.
Brown sugar	℥ iiss.
Compressed yeast	gr. xxiv.
Milk sugar	℥ iij

Dissolve the milk sugar in the water, add to the milk, rub the yeast and brown sugar down in a mortar with a little of the mixture, then strain into the other portion. Strong bottles are very essential, champagne bottles being frequently used, and the corks should fit very tightly; in fact it is almost necessary to use a bottling machine for the purpose, and once the cork is properly fixed it should be wired down. Many failures have resulted because the corks did not fit properly, the result being that the carbonic acid gas escaped as formed and left a worthless preparation. It is further necessary to keep the preparation at a moderate temperature, and to insure the article being properly finished the bottles are to be gently shaken each day for about ten minutes to prevent the clotting of the casein. It is as well to take the precaution of rolling a cloth round the bottle during the shaking process, as the amount of gas generated is great, and should the bottle be of thin glass or contain a flaw it may give way. Some few days elapse before the fermentation passes into the acid stage, and when this has taken place the preparation is much thicker. It is now in the proper condition for allaying sickness, being retained by the stomach when almost everything else is rejected.

Malted Koumiss can be made as follows:

Extract of malt	℥ iss
Compressed yeast	gr. xx.
Brown sugar	gr. x.
Milk, to champagne pint.	

Euonymised Koumiss it a suitable preparation for use in some cases of derangement of the liver in which food is rejected and an hepatic stimulant is required, combined with a slight sedative. To prepare this add fluid extract of euonymin, ℥ iij, to every 16 ounces of the diluted milk, then proceed as with ordinary koumiss.

Coca Koumiss could be made by the addition of cocaine hydrochlorate, to the milk, and would be specially adaptable in cancer of the stomach.

Aerated whey, which is a very refreshing drink in cases of fever, and much used in some parts of Germany, could also be manufactured on the same principle as koumiss.

* From the *Pharmaceutical Journal and Transactions.*

Peptonised Koumiss:—The easiest way of getting a satisfactory preparation is by the adoption of the following formula:—

Papaine	gr. vi.
Milk, to champagne pint.	
Compressed yeast	gr. xx.
Brown sugar	ʒ iij

This does not keep very long.

Meat and Malt Koumiss would constitute a serviceable preparation in consumption.

Chemists dealing in these preparations should impress upon the minds of their customers the necessity of keeping the bottles in a cool place, and the advisability of using either champagne or soda water taps, so that the bulk of the gas may not escape with the first draught.

Notes of Pharmaceutical Progress.

Asbolin is a yellowish syrupy liquid recommended as a specific for many diseases, particularly tuberculosis. It is presumably an alcoholic distillate, as pyrocatechin and homopyrocatechin have been found in it.

Poisoning by Copper.—A medical man at Torquay records a case in which severe diarrhœa and some of the other symptoms closely resembled those of cholera, though it was afterward ascertained that they were due to the presence of copper in preserved fruit, of which the persons affected had partaken (*British Medical Journal*, October 22, p. 891).

Cresylate of Lime is recommended by Prof. Fodor (*Pharm. Zeit.*) as a cheap and effective disinfectant. It is prepared by adding 1 part of lime to 4 parts of water and adding to this milk of lime 5 parts of crude cresylic acid. A syrupy liquid results which is miscible with water in all proportions. An excess of either ingredient produces a solid mass more difficultly soluble than the syrup.

Creasote and Guaiacol.—W. Brandes, *Apotheker Zeitung*, calls attention to the fact that these articles are now met with in commerce, presenting characters which show that they contain considerable amounts of empyreumatic oils from the distillation of wood, varying from 19 to 31 per cent. The necessity of examining these articles before using them in despensing is therefore evident.

Powdered Camphor, prepared as follows, will not again conglomerate (*Der Pharmaceut*). Dissolve camphor in one and a half parts of alcohol, precipitate by the addition of four parts of water. Collect the precipitate and wash with an abundance of water and dry. By keeping account of the quantity of camphor used the quantity left in the diluted alcohol can be calculated and this solution used for making tincture, etc.

Lithium Benzoate in Gout.—P. Adoue disputes the opinion, expressed by Neubauer and Vogel, as to the uselessness of this salt for reducing the formation of uric acid. He states that in the examination of gouty urine he has observed that the administration of lithium benzoate has a decided effect. In one instance he was able to watch its effect during three years, and both the urea and uric acid were considerably reduced in amount, the latter almost disappearing after a time, its place being taken by hippuric acid (*Journ. Pharm. Chim.*, xxvi. 301).

Alumnol is the name given by Dr. R. Heinz, of Breslau, to a new preparation which is stated, to be the aluminum salt of an aromatic sulfonic acid, according to the *Pharmaceutische Centralhalt* probably oxymethyl-sulfonic acid. It is easily soluble, non-hygroscopic, antiseptic and astringent, and, unlike the salts of the heavy metals, penetrates the tissues. It is recommended in gonorrhœa in one to two per cent solution, in suppurating wounds, skin diseases, etc.

Testing Mercurial Ointment.—F. Boyeldieu recommends the saponification of the ointment by heating ten grammes with caustic soda and weak alcohol. When the soap is dissolved and the separated mercury has settled to the bottom, the solution is decanted off, the deposit again boiled with some alkali and spirit, and finally washed with ether. When the mercury is quite clean, it is dried with filter paper and weighed (*L'Union Pharmaceutique*, October 15, p. 432).

Creasote in Pills.—M. Lambo, of Antwerp, suggests the following method of compounding pills containing creasote, as not in any way affecting the action of the drug. The creasote is first absorbed by powdered gum arabic, about twice its weight of the latter being required. Glycerine is then added, drop by drop, until sufficient has been used to form the mass. The pills are said to be very manageable, while the odor and taste of the creasote are stated to be almost completely masked (*Journ. de Pharm.*, xxvi. 357).

A New Chlorine Recovery Process.—A new process for recovering the chlorine from the ammonium chloride left as a by-product in the Solvay process, has been announced by Ludwig Mond, of Brunner, Mond & Co., the English alkali manufacturers. The process is along the lines of the Weldon-Pishiney process, of which so much had been expected. It embraces the volatilization of the ammonium chloride, the decomposition of the vapor by magnesia, and the subsequent decomposition of the oxychloride of magnesia by heat. The novel feature is the use of a coating of antimony in the retort from which the ammonium chloride is volatilized.

Glycosuric Acid in Urine.—A. Geyger has found in testing diabetic urine of 1.022 sp. gr., that 0.4 c.c. reduced 10 c.c. of Fehling's solution, although the same quantity of Fehling's solution took 6.4 c.c. of the diluted urine (1 : 3) for reduction. By the fermentation test it was found that the urine contained 1.4 per cent sugar. By acidifying the urine with sulphuric acid and shaking with ether, a crystallizable substance, melting at 143° C., was obtained, which proved to be the glycosuric acid already noticed by Marshall. It is suggested that in the determination of sugar in urine the possible presence of glycosuric acid must always be kept in view, and that whenever the behavior of the urine toward Fehling's solution is abnormal, the urine must be tested for glycosuric acid, as above discribed. (*Pharm. Zeit.*, No. 63, 1,488).

Mangrove Bark.—The bark of the common mangrove tree (*Rhizophora Mangle*, L.) contains much tannin. A sample extracted with hot water yielded a light reddish-brown infusion. On analysis the total extract was determined at 33.04 per cent., of which tannin constituted 25.10. Boiling with dilute acid resulted in the conversion of the tannin into an insoluble "red" (phlobaphene). Only a trace of gallic acid was indicated in the solution. On heating the tannin to 200° C., the same effect was produced. It is a catechol tannin, somewhat resembling that of mimosa bark, but not identical with it. Its reactions differ from those of generally known tannins. Specimens of the concentrated juice of the bark, in block form, have been received at Kew, but it is reported to compare unfavorably with gambier at the present time (Kew *Bulletin*, 70, 227).

Sodium Salicylate as a Solvent.—M. Conrady, who has previously observed that the fluid extract of cascara is miscible with water in all proportions when an aqueous solution of sodium salicylate has been previously added to it, now states the results of further experiments with the same substance as a solvent. Phenol dissolves in the salicylate solution readily, loses in part its toxic properties, and then mixes in all proportions with water. Creasote also dissolves, but the subsequent addition of water produces a milkiness. Guaiacol is more soluble than creasote. A mixture of equal parts of creasote and sodium salicylate solution (equal parts of water and the salt) has a syrupy consistence, and forms a good pill-mass on the addition of liquorice powder. The mass remains soft for a considerable period. Menthol and thymol are dissolved by the aid of the salicylate, as also are essential oils. It is noted that when turpentine is present in the latter, a larger proportion of the salicylate is required for their complete solution than when the oils are pure (*Pharm. Zeit.*).

Losophan is the name given triiodometa-cresol. It contains about 80 per cent. of iodine, occurs in white needles, melting at 121.5°C., difficultly soluble in alcohol, and readily soluble in either, benzol, and chloroform. At 60° C. it is also readily taken up by fatty oils. Soda solution changes it to a greenish-black amorphous body insoluble in alcohol. Dr. E. Saalfield, of Berlin, has found it very useful in skin affections using a one or two per cent. solution in a mixture of 3 parts alcohol and 1 part water or a salve of vaseline or 4 parts lanolin and 1 part vaseline containing from 1 to 10 per cent. of the medicament. The therapeutics of the drug are summarized follows: It proved useful in the fungoid and parasitical affections most commonly met with. It also proved of service in prurigo, chronic infiltrated eczema, sycosis, acne, etc. It had no effect on dry psorias, or primary syphilitic affections. Losophan is not very active in suppressing suppuration when used in the form of a dusting powder. Its use is contraindicated in inflammatory skin affections. After *Pharm. Zeitung*.

The Collection and Employment of Carbon Dioxide.

The following is a somewhat condensed description given in the London *Brewers' Journal* of a plant that has been erected in a London brewery, where the carbon dioxide is collected from the fermenting worts, liquefied, and subsequently used for carbonating both beers and mineral waters in the extensive works attached to the brewery. According to the system of fermentation carried out and the particular form of fermenting vessel employed, the form of a collector for gathering the gas from the tun varies; in some instances the skimming parachutes themselves are made subservient to the process, but at the brewery in question a long tinned copper pipe, perforated on the under side and closed at the ends, is suspended over the fermenting wort, the distance between it and the "head" being regulated by a simple cord and pulley. This perforated tube is connected with a main pipe passing the whole length of the tun room and fitted with unions and cocks at suitable intervals for the coupling on of the collectors in the separate fermenting vessels, the connections being made by means of a length of ordinary suction hose; this main conducts the gas as given off to the first of three small compressing pumps, the pump drawing the gas from the top of the fermenting wort, and forcing it under a pressure of about 15 lbs. per square inch into the purifiers. These consist of a battery of earthenware wash bottles, the first series containing concentrated sulphuric acid, and the second a dilute solution of manganate of soda, the purpose of these purifiers being to free the gas from the concomitant ethers, alcohols, and yeast torulæ, etc., with which it is laden.

Of course, where the gas is to be used for beer carbonating, this purification would obviously be not only unnecessary but distinctly undesirable.

From the purifiers the second pump draws the gas, compresses it, and forces it through the first condensing coil at an increased pressure of 180 lbs. per square inch. The condensers consist simply of two sets of coils of steel tubing placed in a vessel through which cold water is passed for the cooling and subsequent liquefaction of the gas as it comes heated from the compressing pumps. From No. 1 condenser the gas is drawn by No. 3 pump, still further compressed, and forced again at its liquefying pressure into No. 2 condensing coil, this pressure depending upon the temperature of the cooling water at command (the lower the temperature of the water the lower the final pressure) At this point it passes on to the separator, a simple cylindrical apparatus which effectually removes any water or air which may have been carried over; it also acts as a reservoir from which the now liquid carbonic acid is drawn off into the steel cylinders for use, these being connected with the separator by a small flexible copper tube, with the necessary valves at either end. The cylinder is attached to a weighing balance, tared; the liquid gas is then admitted until the weight is constant; the iron bottle is now disconnected, and another empty one is then attached, and so on until all the gas obtainable has been collected.

The most suitable time at which to commence removing the CO_2 from the tuns is about thirty hours after pitching, and may be continued until the beer is cleansed, or, in the case of skimming, until the first head is taken off; after that time the gas evolved is not worth saving; with stone squares naturally the removal may be proceeded with longer.

It is obvious that care must be exercised not to draw air into the pumps with the gas, as this, although ultimately expelled by the separator, gives the machine so much more work to do, increasing the temperatures and the pressures. There is, however, no difficulty in determining whether air be passing over or not, for, firstly, the pressure gauge will at once indicate its presence; secondly a small collodion balloon may be employed in the fermenting tun, which floats on the surface of the gas, thus showing its level in relation to the collector-pipe; and thirdly, it is a very simple matter to chemically test the gas with caustic soda solution as follows: A graduated tube is filled with the gas, and the soda solution gradually added, the latter absorbing the former, but leaving any air in the form of bubble at the top of the tube.

After careful calculations as to the cost of collection, purification, and liquefaction, it is found that the gas can be produced for about ½d. per lb., or less, assuming that not less than one ton were made a day, this sum including interest on capital sunk in the plant, the cost of wear and tear, fuel, labor, purifying agents, and supervision; while that manufactured in the ordinary way from whiting an acid, taking into account waste from many causes, costs at least 3d. per lb.

It may be added that the space required for a plant to treat between 40 and 50 lbs. per hour is only about 15 square feet, and the power to work it 8 to 10 indicated horse power.

The Treatment of Eczema.

The following formulas are highly spoken of by Dr. R. C. Matheny in the *Medical Record*. The first is to be used as a palliative in acute eczema.

DUSTING POWDER.

	Parts.
Rice powder	40
Talcum powder	20
Oleate zinc	10
Bismuth subnit	5

This should be dusted freely on the surface, and repeated every two or three hours. Sometimes, on account of the intense pruritus, it is necessary to apply a cooling application, a solution of thymol, 1 to 1,000, is probably the best. Salicylic acid and menthol are also useful. A mixture such as the following is effective:

	Parts.
Spiritus vini gallici	100
Glycerinæ	15
Aquæ coloniensis	15
Tinct. benzoini	5
Acidi salicylici	2
Menthol	1

After applying the above, the powder should be dusted on freely. Continue the cooling treatment as long as the active stage continues, and then use a mild ointment containing substances that influence the inflammation, such as :

	Parts.
Ung. rosæ	20
Vaseline	20
Zinci oxidi	15
Bismuth subnit	5
Ichthyol ammon	3
Acidi carbolici	1

M. Sig.: Apply twice a day.

Nearly all cases of simple eczema will respond satisfactorily to this line of treatment.

In the chronic stage, where you have a thickened hypertrophied epidermis, scaly and hard, the object is to change the chronic to an acute form. For this purpose use a strong ointment to soften the parts and remove the scales. The best thing for this purpose is the ointment diachylon, with the addition of five to ten per cent. salicylic acid, and continue to apply this until the skin is smooth, when one of the bland ointments should be substituted for an indefinite time.

There is a form of eczema manifesting itself chiefly at those locations where the sebaceous glands are numerous, *e.g.*, on the face, cheeks, chin, and scalp, also on the chest and on the back between the shoulders, characterized by a low grade of inflammation and the appearance of thick, yellow, greasy crusts, and very frequently accompanied by profuse dandruff on the scalp.

It causes the patient to have a very uninviting appearance, and untreated runs an extremely chronic course. And yet there is no form of skin disease which the dermatologist so gladly undertakes to treat as this seborrhoidal eczema. It will almost invariably yield to a three to five per cent. ointment of sulphur and resorcin, which may be combined thus :

	Parts.
Ung. rosae	40
Zinci oxidi	8
Lanolini	8
Sulph. flor	2
Resorcin	1

Potassium Dithiocarbonate.—Tommasoli and Vicini have used this salt with success in various forms of skin disease as ointment, and also in water solution containing as much as 5 per cent. It is an orange-red, crystalline and deliquescent powder readily soluble in water, slightly in alcohol. It is prepared by the action of carbon bisulphide upon caustic potash solution.

Miscellaneous Formulas.

The editor of the *Chemist and Druggist*, in commenting on the two formulas for marking inks given below says : If the blue ink were made on the same principle as the crimson one it would, be much better. In that case the copper salt should be dissolved in the ammonia. The second ink is in every way an excellent one.

BLUE MARKING-INK.

Nitrate of silver	℥ iv.
Strong solution of ammonia	℥ iss.
Bicarbonate of soda	℥ iv.
Sulphate of copper	℥ ij
Powdered gum arabic	℥ vj.
Distilled water	℥ ij.

Dissolve the nitrate of silver in the ammonia solution, and the other solids in the water. Mix the two solutions.

CRIMSON MARKING-INK.

Nitrate of silver	℥ j.
Carbonate of soda	℥ iss.
Tartaric acid	℥ ij. ℈ ij.
Strong solution of ammonia	℥ ij.
Carmine	gr. vj.
Powdered sugar	℥ vj.
" gum arabic	℥ x.
Distilled water	a sufficiency.

Dissolve the silver nitrate and sodium carbonate separately in a pint of distilled water, and mix the solutions. Wash the precipitate by decantation with 2 pints of water three times ; collect the last on a filter, and wash with a fourth pint of water ; drain well ; transfer the precipitate to a mortar and rub up with the tartaric acid ; when effervesence ceases, add the ammonia (in which the carmine has been dissolved), then the sugar and gum (previously made into a cream with water). Finally make up to ℥ vj. with distilled water.

The following are given by E. Soxhlet in the *Drogisten Zeitung* :

FOR GREASING GUNS.

Melt together 1 part of paraffin, 1 of ceresin and six parts of vaseline oil.

A NEW BEDBUG POWDER.

	Parts.
Alum, powdered	100
Lampblack	2
Ethereal oil of sage	1

This can be used either as a powder or mixed with water into a paste and then put into the crevices of the walls and woodwork. It is said to be very effective.

FLY PAPER.

	Parts.
Potassium bichromate	10
Sugar	30
Ethereal oil of pepper	2
Alcohol	20
Water	120

Mix thoroughly, digest for several days and filter off the liquid. In this solution soak unsized absorbent paper allow to dry, and again soak and allow to dry.

NON-POISONOUS RAT BANE.

The seed of the tropical plant Acacia lophanta furnish a rat bane which while deadly to rats and mice is innocuous to man and also to domestic animals. These seeds, which resemble the grains found in St. John's bread, are very hard and can scarcely be broken up in a mortar. They must for this purpose be ground to powder in a mill. The best form for administering the poison is in the shape of pills, according to the following formula:

	Parts.
Acacia lophanta, seed, powdered	10
Sugar	3
Flour	3
Anise oil	A sufficient quantity.

The anise oil is added to attract the rodents. The pills are to be strewn around the places where the pests frequent.

FLOOR STAIN FOR SOFT WOOD.

	Parts.
Glue	500
Water	5000
Potassium bichromate	15
Anilin brown, water-soluble	50

Dissolve the glue in the water by the aid of heat ; add the other ingredients and apply luke warm.

A correspondent of the *Pharmaceutische Zeitung* states that he has found a tablespoonful of cornu cervi ustia to be the best remedy for the practice of eating wood by horses and cattle.

Notes, Queries, and Answers.

Under this heading we shall, to the best of our ability, endeavor to answer such questions addressed to us as come within the scope of this journal, provided they are accompanied by the name and address of the writer. Unless special instructions to the contrary accompany the query, the initials of the correspondent will be quoted at the head of each answer.

When asking for the formula of an unusual, patented or proprietary compound, always accompany the query with any information you may already possess regarding the locality in which it is used, its uses, and reputed effect. When it can conveniently be done, send also a specimen of the label used on packages of the compound.

Spirit of Nitre and Extract of Uva Ursi.—C. L., Galesburg, Ill.—The reaction which occurs between spirit of nitre and fluid extract uva ursi was studied some years since by the late J. L. A. Creuse, who arrived at the conclusion that the effervescence noted was due to the evolution of carbon dioxide, which was set free by the decomposition of the tannin present in the fluid extract under the influence of the nitrous radicle present in the nitrous ether. In fact, if the nitrous ether is quite fresh, there will not be any reaction; but if the ether be acid at all, the decomposition will set in.

Colorless Solution of Hydrastis.—J. W. E., Aberdeen, Miss.—The hydrochlorate of hydrastine being readily soluble, it should be used instead of the alkaloid itself, which is almost insoluble in water.

Dangerous Dose of Turpentine.—F. H. Chester, Pa., writes as follows: "I received the following prescription from one of our young practitioners:

For child.

℞ Ol. terebin.....fl ℥iss.
Ether.....fl ℥ss.
Alcohol q.s. ft.....fl ℥iv.
Misc. Sig. ℥j. ter in die.

"I held for several hours, as the prescriber was out of town; the parties got tired and would not wait. They took the prescription elsewhere, and there it was put up without hesitation. As I had expected would be the case, the child was nearly strangled by the first dose, and the doctor ordered no more to be given. He called me up on the telephone, and said that there was nothing the matter with the prescription. He said that he did not like to have me holding his prescriptions for four or five hours, and altogether seemed to be in rather a bad humor. Will you say whether I did right in holding the prescription or not?"

Under the circumstances detailed, we see no reason to find fault with the action of the pharmacist. The result which followed the administration of the medicine, and the fact that the prescriber himself practically admitted his error by discontinuing its administration, both justify the pharmacist. That the prescriber should feel annoyed and in "rather a bad humor" is perfectly natural, as nothing is so humiliating, particularly to a young practitioner, as to be detected in an error.

In such cases as this, the display of a great deal of tact is necessary, and even then the pharmacist may be unable to avoid unpleasantness.

We would like to have the opinion of our readers on this case.

A Plant Specimen, Linaria Vulgaris.—E. A. Z., Havre de Grace, Md., submits for recognition a plant which is recognized by Prof. H. H. Rusby as Linaria vulgaris, which, so far as we are aware, has not been credited with any medicinal qualities. Prof. Rusby states, however, that a few breaths drawn over a drying mass of this plant in haying time has proven sufficient to nauseate him, and, unless he escapes, to cause him to vomit. It is possible, therefore, that the plant possesses some medicinal value which has, at yet, not been recognized.

Is Opodeldoc Soap Liniment?—J. E. N., Troy, N.Y. —The "Scientific American Cyclopædia of Receipts" gives the following: "Steers' opodeldoc is as follows:

White castile soap, cut small.....2 lbs.
Camphor.....5 oz.
Oil of rosemary.....1 oz.
Oil of origanum.....2 oz.
Rectified spirit.....1 gal.
Water of Ammonia.....11 oz.

Dissolve in a corked bottle by the heat of a water bath, and when quite cool strain; then add the water of ammonia. Cork lightly and tie over with bladder.

"It will be very fine, solid and transparent when cold. The liquid opodeldoc is prepared by taking—

Alcohol.....1 qt.
Castile soap, in shavings.....2 oz.
Camphor.....1 oz.
Oil of rosemary.....½ oz.
Ammonia water.....2 oz.

Dissolve the soap shavings in the alcohol by the aid of a gentle heat, and then add the other ingredients.

In the latest edition (1892) of Cooley's "Cyclopædia of Practical Receipts" it is stated that "this [Steers'] differs from common opodeldoc chiefly in containing more soap." This latter work quotes under opodeldoc the formula of the Philadelphia College of Pharmacy, which does not differ very widely from that given above for liquid opodeldoc.

There appears in fact, to be some difference in the practice obtaining in different localities as to the nomenclature of opodeldoc the term in some sections being understood as meaning the solid preparation, while elsewhere the liquid is meant, and for this the liquid soap liniment is ordinarily dispensed.

BIBLIOGRAPHY.

Any of the works reviewed in these columns will be forwarded on receipt of the price, when the price is stated, by the AMERICAN DRUGGIST, 37 College Place, New York.

PTOMAINES AND OTHER ANIMAL ALKALOIDS: Their Detection, Separation and Clinical Features. By A. C. Farquharson, M.D. Bristol and London, 1892.

The book does not claim to be an original contribution to the literature of this relatively new but important subject, but only to be an accurate and concise résumé of the main facts as now ascertained. From this point of view we find the book to be thoroughly deserving of praise. Indeed, more is due the author than his modesty has allowed him to claim for himself. He has clearly stated the analogies between the vegetable alkaloids and the animal alkaloids, both those of the normal secretions and those of purely putrefactive origin. The former class of these animal alkaloids, he says, "occur as constituents of normal tissues or fluids, and in such conditions are regarded as products of tissue metamorphosis, just as in plants they are regarded as products of destructive metabolism." The results of the study of this class of bodies, known now as "leucomaines," by Gautier and by Brieger, are well stated and the importance of the presence in the animal economy and in the genesis of disease is indicated.

Equally satisfactory is the historical sketch of the labors of Poehl, Selim, Gautier and Brieger in connection with the putrefactive alkaloids known as "ptomaines." The fact developed by Brieger and others that many of these ptomaines are formed and disappear as successive stages of putrefaction are reached, is also noted. As the author says, "in the order of putrefaction, basic and toxic bodies as cholin, neuridine, trimethylamine, cadaverin, putrescin, saprin, mydalim, etc., appear for a time only to be replaced by other and more poisonous bodies." The "tox-albumens" or "albumenoses" are also noted as intermediate products in this cycle of changes. A chapter is devoted to the general methods of extraction, the general reagents for detection, the general properties and the physiological effects of the ptomaines as a class. They are thus taken up in detail under the two classes of non-oxygenated and oxygenated ptomaines and their individual formation and characters noted.

More than half of the book, however, is devoted to the clinical observations of ptomaines, their development in the system, effect upon it, and means of control and elimination.

The book is throughout very suggestive to the general scientific reader as well as to the medical practitioner, and it can be unqualifiedly recommended for reading. It is issued in good form, well printed and tastefully bound.

New Inventions and Novelties.

Under this heading we will be pleased to insert, free of charge, a description and illustration of novelties and new inventions of interest to the drug trade.

Inventors or manufacturers are invited to send in descriptions, specimens and illustrations of anything which they may have suitable for mention in this column.

A New Perfume Atomizer.

The accompanying cut illustrates a novel device recently patented by F. F. Ingram & Co., of Detroit. It is intended for use in displaying perfumery, and

possesses some points of especial value for this purpose. It is about three and one-half inches in height, and three and three-fourths inches wide, and will contain an assortment of ten odors at one time, any one of which can be sprayed at will by simply touching a button. The bulb can be easily detached when the atomizer cannot be operated, thus preventing waste. Each bottle bears a label of the perfume it contains. The upper part of the apparatus is of metal, nickel-plated, and revolves on a polished wood base.

A New Poison Cabinet.

Mr. Baron A. Meade, Osborn, House Block, Rochester, N. Y., has devised a new Poison Cabinet, consisting of a revolving circular case, having three shelves with 32 separate compartments for the reception of the containers of the poisonous drugs. In front there are three doors, one for each shelf, which are opened by pressing upon the corresponding key placed at the lower left hand corner of the case. The mechanism is such, that only one door can be opened at a time, it being necessary to shut this before the case can be revolved sufficiently to bring one of the other

doors square to the front. The compartments on the separate shelves are so arranged that no two are exactly over each other. The inner circular case is revolved with the greatest ease by means of a knob under the base being a continuance of the pivot upon which the case turns.

The cabinet is made in several styles but the mechanical device is the same in each. The dimensions are: 14 inches square, and 30 inches in height, exclusive of the base.

Lightning Cleanser.

The following is given in the *Chemist and Druggist:*

Curd soap	℥ iij.
Washing-soda	℥ ij.
Borax	℥ j.
Solution of ammonia	Oj.
Methylated spirit	℥ iij.
Methylated ether	℥ ij.
Oil of eucalyptus	ʒ iss.
Water to	cong. j.

Shave the soap into shreds and dissolve in three pints of warm water, then add the soda and borax. When cold add the oil dissolved in the spirit and ether, shake, and make up to a gallon with water.

The quantity of ether may be doubled if desired. It is very effective in softening dirt on clothes.

NEWS AND NOTES.

The New Poison Law in Mississippi.

Mr. John P. Mayo, of Columbus, Miss., secretary of the Tombigbee Pharmaceutical Association with a view to obtaining an authoritative construction of clause 1,214 of the new poison law of Mississippi, addressed a letter to the Attorney General of the State, and has been so kind as to submit the correspondence on the subject, the material part of which we reproduce below.

Hon. T. Marshall Miller, Attorney-General, State of Mississippi, Jackson, Miss.

DEAR SIR: As secretary of the Tombigbee Pharmaceutical Association, a local society embracing all the druggists of Columbus, I write to ascertain the scope of the clause No. 1214 relating to the sale of opium or morphine and their preparations without a physician's certificate. Please advise if all the domestic remedies containing opium or morphine in the minutest quantities are included. I will mention a few showing how seriously it will inconvenience the people and in many cases work a hardship upon the poor who are unable to pay a physician's fee for prescription or certificate. Paregoric contains 1-5 grain opium to teaspoon Bateman's Drops, Godfrey's Cordial, Dewee's Carminative, Cough Syrups, Liniments, Colic Mixtures, Diarrhea Cordials, all contain more or less of some of the preparations of opium or morphine. So extensive is its use and general its application to the manifold ills of the public, that to remove it from the list of general domestic remedies and force all who used or required such compounds to seek to pay for medical advice would work an unparalleled hardship upon the class least able to bear additional burdens, the invalid poor. Awaiting your construction of the intent of this clause, I am,

Yours truly,
(Signed) JNO. P. MAYO, Secy.
COLUMBUS, Miss., Oct. 20, 1892.

The clause referred to reads as follows: "If any druggist or other person whomsoever, shall sell or give away any sulphate or other preparations of morphine or any opium or any preparation thereof, without the person buying or receiving the same having, presenting and leaving with seller or giver a written certificate or proper prescription signed by some reputable practicing physician, showing that the same is necessary or proper to the health of the person for whose use the same is desired, naming the person, he shall be guilty of a misdemeanor, and on conviction, shall be punished as prescribed in the last section, which is a fine of $10 or $50 for each offense."

This letter was referred by the Attorney General to R. H. Thompson, Esq., one of the codifiers of the laws of the State, and the reply received was transmitted as follows:

John P. Mayo, Esq., Columbus, Miss.

DEAR SIR: I herewith hand you Mr. R. H. Thompson's letter in reply to mine, and have to say upon reflection that I think he is right, and that the statute will be limited in its application so as not to embrace these domestic remedies, although they may in a certain sense be deemed preparations of opium.

Yours very truly,
(Signed) T. M. MILLER.
JACKSON, Miss., Oct. 26, 1892.

[THE ENCLOSURE.]

Hon. T. M. Miller, Jackson, Miss.

MY DEAR SIR: Responding to your favor of yesterday, I return enclosed the letter of Mr. Mayo, Secretary, etc., sent me.

I am unable to point you to any model for No. 1214, Annotated Code, and consequently cannot cite you to an adjudication construing it. I think, however, but my memory is not clear, that a similar statute is to be found in the penal code in New York.

It never occurred to me, and it evidently did not occur to Messrs. Dillard or Campbell, or to any member of the legislature, that such domestic remedies as are mentioned by Mr. Mayo were prohibited by the section.

The evil which was intended to be remedied was well understood, and was, if the language be broad enough to cover such remedies, the rule announced by the Supreme Court of the United States in the case of Holy Trinity Church v. United States, 143 U. S., 457, 472, should and would doubtlessly be applied by the courts:

In that case the church had called to its pastorate an Englishman, and it was sought to avoid the call on the ground that the contract for service was in violation of the act of Congress prohibiting the importation of aliens under contract to perform labor, etc.

The court say (p. 472): "It is a case where there was presented a definite evil, in view of which the legislature used general terms with the purpose of reaching all phases of the evil, and thereafter, unexpectedly it is developed that the general language thus employed is broad enough to reach cases and acts which the whole history and life of the country affirm could not have been intentionally legislated against. It is the duty of the courts, under those circumstances, to say that, however broad the language of the statute may be, the act, though within the letter, is not within the intention of the legislature, and therefore cannot be within the statute."

I am of course not a pharmacist, but it seems to me a little singular to speak of paregoric as a preparation of opium. You might as well say that a house was a preparation of hog bristles because hair was used in the plastering. A preparation of opium is, it would seem to me, "opium prepared": any medicine which retains the distinctive character of opium or morphine I should say is within the statute, but if it is a distinct medicine, even though opium or morphine be used in its make-up, I would take it to be without the statute.

I am obliged for your kindly expressions about the Code. Yours truly,

R. H. THOMPSON.
BROOKHAVEN, Miss., Oct. 25, 1892.

Associations—Boards—Colleges.

ILLINOIS BOARD OF PHARMACY.

At the practical examination of the State Board of Pharmacy, Illinois, held in Chicago, October 18, the following passed a satisfactory examination as licentiates in Pharmacy, and were registered as registered pharmacists by examination: J. A. Abrahamson, E. R. Barnes, D. J. Bechard, C. H. Koentz, A. H. Lesser, R. A. Patrick, Jessie M. Porter, O. E. Werner, G. F. Wetherell, of Chicago; J. H. Bereman, Aurora; W. G. Boman, Alton; J. Liess, Jr., Mokena, and G. C. Sehorn, Springfield.

The following passed a satisfactory examination as assistant pharmacists, and were registered as registered assistant pharmacists by examination: P. O. Bakke, M. C. Beck, J. E. Feder, T. P. Flannery, J. V. Jensen, F. W. Otto, E. S. Pitzer, F. Wendt, Jr., of Chicago; E. P. Dorchester, Aurora; M. C. Mendenhall, Vermilion Grove; C. J. Pfetzing, Havana, and J. Snodgrass, Bloomington.

THE WISCONSIN ASSOCIATION is making an active and aggressive campaign against cutters on an independent basis, as is shown by the following circular which they send to jobbers supplying cut rate stores:

At the last meeting of the Wisconsin Pharmaceutical Association resolutions were passed declaring it to be the sense of the members of the Association that steps be taken to prevent the selling of adulterated goods, etc., in this State. The Association looks upon cutting prices as an evidence of selling adulterated goods, or goods of an inferior grade. At that meeting it was provided that in each county a committee be appointed to report the sale of goods either known to be adulterated or at cut prices, which will be taken as conclusive evidence of adulteration. When such a case is reported, the Association expect to notify the jobbers and manufacturers selling goods to such retailers that the members of the Association would deem it their duty to cease buying of such jobbers or manufacturers if they continue to sell to such retailers. The Association has a membership of over four hundred and sixty. It has been reported by the County Committee that ——— of ——— County Wisconsin, is selling at cut prices, and that he purchased goods of you. We call your attention to this matter and ask your views upon the subject. It becomes my duty, as Secretary, to notify the members of the Association, giving the names of the houses that sell goods to retailers who are selling adulterated goods, or goods at cut prices, which is taken as evidence of adulteration, or as conclusive evidence that such jobbers or manufacturers are selling to such retailers at better prices than members of the Association generally are getting.

Respectfully yours,
(Signed) E. B. HEIMSTREET, Secretary.
JANESVILLE, Wis.

THE ST. LOUIS COLLEGE ALUMN held a reception on the formal opening of the new college building at 2108 Lucas Place, St. Louis, Tuesday evening, October 25th. Dr. C. O. Curtman delivered an illustrated lecture on polarized light, after which Messrs. Charles A. Lips, Samuel Barber, H. M. Whelpley and Theo. A. Buckland engaged in a debate on women in pharmacy.

THE VIRGINIA PHARMACEUTICAL ASSOCIATION met at Petersburg on October 11th. Among the papers presented were the following: "Chemical Force in its Relation to Other Forms of Energy," by Hugh Blair, of Richmond; "The Relation of the Pharmacist to the Community," by T. Roberts Baker, of Richmond; "The Hypophosphites, their Chemistry and Therapeutics," by Hugh Blair, and "Citrated Kali," by C. B. Fleet of Lynchburg. The following officers were elected for the ensuing year: President, F. M. Wills, Charlottville; Vice-Presidents—J. M. Burke, Petersburg; W. G. Burgess, Manchester; C. P. Kearfolt, Martinsville; R. G. Dalby, Hampton; Secretary, C. B. Fleet, Lynchburg; Corresponding Secretary, T. Roberts Baker, Richmond; Treasurer, C. H. Lumsden, Lynchburg; Local Secretary, S. P. Christian, Jr., Roanoke.

Executive Committee—Geo. T. Mankin, Falls Church; Edgar War-

field, Alexandria; E. L. Robey, Herndon.

To supply vacancies in the Board of Pharmacy—R. H. Stratton, Gordonsville; C. P. Kearfolt, Martinsville; T. Ashby Miller, Richmond; Robt. Brydon, Danville; R. W. Booker, South Boston.

The Association decided to meet at Blue Ridge Springs, second Tuesday in September, 1893.

TENNESSEE ASSOCIATION.—Mr. Will Vickers secretary of the Tennessee Druggists' Association writes from Murfreesboro as follows: "We now have a pharmacy law in the hands of the legislative committee of the Association with a view to further revision. Mr. Burge, as president of the Association, has issued a circular letter to the druggists of the State directing their attention to the need which exists for legislation on the subject of pharmacy. Under the proposed bill all pharmacists who at the passage of the bill are twenty-one years old and have had five years' experience will be registered an application and payment of two dollars without examination.

"This registration is to be renewed every three years at a cost of one dollar. Registered assistants must be eighteen years of age and have had three years' practical experience, the fees for registration being one dollar for first registration and fifty cents for renewals. A circular has also been adressed to the members of the legislature requesting than to interview such druggists as are among their constituents so as to learn their views on the subject before going to Nashville."

THE CIRCLE OF WILLIS is the name given to a club in this city composed of physicians, pharmacists, dentists and veterinary surgeons. Although a new organization, it has something like one hundred members and is growing very rapidly. They have recently taken a house and fitted up handsome apartments. Pharmacist T. E. Fraser, of 1024 Second Avenue, is the secretary ro stylus, and will be pleased to furnish additional particulars to those interested. Dr. Frank A. McGuire is the grand chief demonstrator.

MAINE BOARD OF PHARMACY.—At a meeting held at Portland, October 18th, five applicants for registration were examined, of whom the following were successful: C. H. Moore, G. E. Sampson and Walter L. Woodman.

THE ALUMNI ASSOCIATION OF THE MASSACHUSETTS COLLEGE OF PHARMACY propose to hold during the coming winter a series of meetings, the purpose being to awaken interest in the association and in college affairs. President Scoville has planned a number of excursions for the senior class to places of pharmaceutical interest, to which members of the Alumni Association are cordially invited.

THE PHARMACAL BOWLING CLUB.—The annual ball and tenth anniversary of the Ph.G. Bowling Club, of Brooklyn, will be held at Schneiders' Teutonia Assembly Rooms on Wednesday, December 7th. The officers are: President, J. Pfeiffer; vice-president, W. Wygandt; treasurer, C. Bow; secretary, C. Kessler; chairman of ball committee, Al. Behrens.

NEW YORK COLLEGE OF PHARMACY has secured the famous Canby collection of botanical specimens, which is said to be the largest and most complete herbarium in the United States. There are over 60,000 specimens in the collection, and every specimen is beautifully mounted. The value of the collection is placed at $20,000, but as Mr. Canby, who is now a very old man, desired to dispose of it, the College of Pharmacy secured it at a much lower figure. On the evening of Oct. 18th there was a large gathering of botanical enthusiasts, pharmacists, and students of pharmacy, at the college building, when an entertaining description of the herbarium was given by Prof. H. H. Rusby. He said it was not only one of the best collections of botanical life he knew of, but it was especially adapted to the uses of a college of pharmacy, as all the medicinal herbs from which come the essential drugs are represented in it. This, together with its present collection of 56,000 botanical specimens, Prof. Rusby said, places the College of Pharmacy in possession of a larger library of these specimens, in point of numbers, than any other college in the country, and the third largest in the point of individual specimens.

CORRESPONDENCE.

INCREASED OUTPUT OF WHISKEY.

Editor AMERICAN DRUGGIST:

There has been almost unexampled activity recently among the distilleries that form the principal business interest of Peoria. The large receipts of corn have gradually depressed the price until it is now selling at about 40 cents a bushel, fully one-third less than last spring. The distillers are taking advantage of the low price of the grain to largely increase the output of their plants.

The officers of the Whiskey Trust report that they have not only increased their output here, but have also started up some of the Cincinnati distilleries, which have been closed for some time past, and the Calumet distillery at New South Chicago. The output of the Shufeldt distillery at Chicago has also been increased and the officers of the Trust contemplate resuming operations in the other idle plants at Chicago. They believe that the market will absorb all of the increase readily, as the demand on whiskey has been active for some time past. The increased production has enabled the Trust to feed 40,000 head of cattle this year as against 25,000 head last year.

E. C. HAMILTON.

PEORIA, Ill., Nov. 1, 1892.

DRUG DRUMMERS ORGANIZE.

Editor AMERICAN DRUGGIST.

DEAR SIR:—For some time past the travelers representing Missouri drug firms have been agitating the necessity of establishing an association for mutual protection and to encourage a more friendly and social feeling between the wholesale houses, the retailers and the men who carry samples and prices in gripsacks. There was an informal meeting held in this city some time since looking to the perfection of such an organization, and Mr. Ed. G. Orear and Mr. A. S. Forker were appointed to prepare a constitution to be reported at a later meeting at which about thirty drug drummers met.

A permanent organization was effected under the name of the Missouri Pharmaceutical Travelers' Association. E. G. Orear was elected president and A. S. Forker secretary. The constitution as reported by the committee was adopted. It provides that any traveling man selling to druggists is eligible to membership. The annual dues were placed at $1. Fifty-one members were enrolled. There are 102 drug travelers representing Missouri houses, and it is the desire of the association that all of them will come in the order. The next annual meeting will be held in June, 1893.

ONE OF THE MEMBERS.

ST. LOUIS, Mo., Oct. 15, 1892.

California Wines.

Very often the question arises whether California can produce just as good a wine as Europe. To this question we will answer positively "yes." There is no soil on any part of the globe richer and more appropriate to produce a good grape than